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THE STANDARD OF STRENGTH FOR IMPERIAL DEFENCE.

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Monday, 27th June, 1904.

The Right Hon. Sir EDWARD GREY, Bart., M.P., in the Chair.

THE paper I am about to read is intended to be the pivot of a discussion on a very practical question. I believe that theoretically all parties are agreed as to the vital necessity of naval predominance to the Empire. It has been so throughout history. Even our American colonists, who were driven to revolution in the 18th century, were at one with us as to the maintenance of measures necessary to our naval predominance just as men like Mr. Hofmeyr, in South Africa, who have differed profoundly from our internal policy, were enthusiastic adherents of a strong British Navy. The first act of the Irish Parliament was to vote £100,000 for the Navy, a circumstance which caused much favourable comment in England. If anyone were inclined to question the unanimity of this opinion, I urge him to study the long series of quotations from historians, statesmen, and others printed as an appendix to this paper. I have taken this unusual course because we all see the necessity for continuity of policy. In the case of present-day statesmen, their responsible utterances must not be treated as the mere lip homage of political hypocrisy. It is hardly necessary to insist on continuity of policy. As a wind vane, oscillating from one point to another, shows dangerous winds, so all marks of violent fluctuations in policy are unsound and to be distrusted. The ill-starred reductions of the Navy in the last century were in every case followed by the squandering of public money on panic measures, such as characterised the Penjdeh crisis of 1885. The lesson of continuity of policy applies equally to the sailor and soldier as to the statesman. There are experts who wish to adopt everything for which a plausible show of utility can be made from Brennan torpedoes to floating docks intended to meet disabled ships at sea. By running after these fads, Imperial defence becomes like

the music halls—a reflection of popular whims. One looks to the Defence Committee and to the War Course at Greenwich to promote sane ideas and to give that prestige to the expert which has been totally lacking through his own want of intellectual breadth. No more severe reproof has been administered to naval and military officers than the saying of the late Lord Salisbury, that experts could be found to support any view. The Wei-Hai-Wei jumble, from one extreme view to the other, is a case in point. The experts have in their favour the fact that their views are honest. On the other hand, the position of a Government based upon popular control is somewhat akin to that of Johnson's description of the stage, and so we may say:—

> The House but echoes back the public voice;
> The leader's laws the leader's patrons give,
> And they who live to please must please to live.

The confidence of the public is thus the fulcrum of Government decisions. The late Lord Salisbury, as Prime Minister, stated that "The defence of the country is not the business of the War Office or the Government, but the business of the people themselves." As a Cabinet Minister, Mr. Walter Long put it: "If the Government had made mistakes, it was largely because the people had failed to impress on the Government what they ought to do." The complaint is somewhat feeble, considering how utterly in the dark the public are kept as to the views experts are urging on the Cabinet. The two-Power standard has this sole merit: that it is a definite minimum which can be argued about in public, and we are not dependent on the amateurish opinion of any politician. So long as reports from the expert advisers of the First Lord are never placed before Parliament, as is the practice in the United States, and as was advised by the Hartington Commission, so long will this standard be the best method of regulating our shipbuilding programme. If we had the advice of the experts before us, the best standard would be that once proposed by Lord Selborne, viz.: "The Navy ought to be so strong that it can have a reasonable certainty of success in the performance of any duty which it is reasonably probable that it will be called on to perform." Under present circumstances it is not a reliable standard. Politicians would always declare that they are meeting the reasonable probabilities of war just as nearly all candidates commence their election addresses with some grandiloquent reference to efficiency. Thus they justified Mr. Brodrick's army corps scheme, the fortification of certain approaches to London, and all the bricks and mortar expenditure of past years. I do not think probabilities had much to do with the majority of these schemes. They were mostly fancy pictures and old maids' day-dreams. On the other hand, prior to the special naval programmes of 1885, 1889, and 1894, the responsible Cabinet Ministers declared that the preparations of other maritime Powers had been fully met. If statesmen take up their portfolios like barristers do their briefs, they cannot complain if they lose prestige.

I am not a pessimist, and so I do not feel hopeless of our system of defence being placed on an efficient and economical basis. There was a time, in 1848, when Moltke, despairing of his countrymen, contemplated emigration to Australia. Judged by results, there can be no question that German defence was placed on an efficient and economical

basis. The difficulty in England, to my mind, lies in the ignorance of the so-called educated classes. Like the laws which the Athenians received from Solon, so must be our system of defence; not the one which is intrinsically the best, but the best we are capable of understanding. Nothing but vigilant and candid criticism will prevent the dispersion of money on passive defence owing to the influence of the Landlubber School.

Lord Selborne said on 25th February, 1903:—"We have been shamefully unbusinesslike in the way we have treated questions of national defence." The first thing we have to do in Imperial defence is to recognise the respective spheres of the three S's, the Statesman, the Sailor, and the Soldier. The British Navy stands out as the embodiment of England's greatness, and so affords a touchstone of the capacity of political parties to manage the affairs of our maritime Empire. If it decays relatively to rival Navies under either party, then that party, whatever its merits may be in other directions, is unfit to govern. Take away our freedom from internal dissensions and our naval power and we should be as Samson, shorn of his strength. We turn to those who rage over fiscal controversies and the accumulation of wealth, and, in the words of Solon, we say: "Sire, if any other come that hath better iron than you, he will be master of all this gold." The standard of strength is, in the first place, a matter for statesmen, and in the second place, a matter for sailors and soldiers. Statesmen dictate policy, and policy determines armaments. A reduction of armaments should therefore be preceded by a pause in the policy which originally led to the increase of armaments. The statesman is entitled to tell us which are the nations we may be at war with, the territories we covet, and the task the complementary naval and military forces will be expected to carry to a successful issue in the event of war. I say successful issue, because an island dependent upon trans-marine communications should avoid a conflict unless it can wage war with success. The statesman would probably say to the experts: "In the organisation of the Army you may neglect the consideration of a war with the United States." Having obtained their directions, the experts only are capable of laying down the requisite forces each in his own element, limited only by what the other element can do. If the sailor can safeguard the country from invasion, then I say with all the emphasis I can command, that the soldier has no right to attempt to deal with the question. Mr. Brodrick's original proposals provided 435,000 out of 680,000 for home defence. Out of the wreckage of those proposals we find that less than one in three of our land forces are available for service abroad, whereas before the panic about steam having "bridged the Channel," 54 per cent. were available for service abroad. The mischief of it all is that Mr. Brodrick was allowed to tell the Colonial Premiers that we organised the Army "in view of the possibility of our at any time losing the command of the sea." The statesmen must try again if they wish to be looked upon as statesmen. They must learn that it is as ridiculous to suppose that a nation can beat an antagonist by a system of passive defence as it would be to expect to draw the results of radium out of lead. And yet what do we find? The Volunteers were 33,500 short of their establishment in 1899, yet in 1902 the establishment was raised to 346,450, and naturally the shortage went up to 73,400. Let us clearly understand that the Auxiliary forces cost as much as all our battle-ships in home and

Mediterranean waters, allowing for interest on first cost, replacement, and maintenance in commission. Even so, the Auxiliary forces are a long way below their establishment; they are publicly condemned as inefficient, and now it is proposed considerably to increase the cost. In criticising the basis on which forces are organised, I make no criticism on the forces themselves. The Volunteer movement was inspired by high patriotism. The Militia have always done nobly, and have volunteered for service abroad in spite of bad treatment. They were drained of their best officers and men before they sent out 1,691 officers and 43,875 men to South Africa. They could not be expected to be up to the mark when five battalions were from 13 to 17 officers short, and so on. Of the Volunteers, 594 officers and 19,208 men went to South Africa.[1] A certain number took five shillings a day and joined the Imperial Yeomanry, which body was mainly composed of "civilians pure and simple." We have here a pretty clear indication of how we can best bring the Auxiliary forces into harmony with our naval predominance. That naval predominance is intended to give us the ability to win command of the sea. Command of the sea enables a Power to indulge in non-naval operations on the sea based on secure sea communications during the indefinite period of time required for bringing them to a successful conclusion. Whether the work be the reinforcement of India, or the application of Pitt's "sugar island policy," it demands the organisation of our land forces for service oversea as soon as the Navy can give them passage. This is elementary strategy, but it seems necessary to point it out in view of the amazing contradictions of General Nicholson's evidence, to which I draw attention in the Appendix. When Sir William Nicholson's evidence before the War Commission was published, I had hoped that he might be recruited to the Blue-Water School. He then said that in 1899, out of a force of 750,000 only 70,000 men "were organised and available for despatch across the seas for the reinforcement of any part of the Empire that might be attacked or for offensive action." Is it not clear that we had been concentrating for defeat instead of for victory? I should like to see the Army Estimates indicate clearly:—

1. Expenditure on troops available for expeditions.
2. Passive defence at home.
3. Passive defence abroad.

I think it would be a revelation to the country. It would show how far we are from realising what the Prime Minister said on 27th November, 1903:—"Our great difficulty is not home defence; it is a foreign difficulty. We have got a land frontier which can be attacked by a great military Power. That land frontier is India. . . . It is not a problem of home defence. The Navy can deal with home defence. It is a problem of foreign defence."

In framing their proposals the experts are entitled to point out that in our world-wide Empire they are called upon, at the instance

[1] In answer to Sir John Colomb, the Secretary of State for War said, on June 15th, that in 1899, on the outbreak of war, the enrolled strength of the Militia was 98,050, and of the Volunteers, 222,584. Of the Militia, 51,488, and of the Volunteers, 19,856, volunteered for service in South Africa.

of statesmen at the Foreign and Colonial Offices, to violate all the principles of their art by so scattering their forces during peace that they cannot deal as concentrated a blow as might otherwise be the case. The parade of force at many points has its uses in dealing with untutored rulers, who do not consider the real power in the background. It is, however, the mobile concentrated force which most impresses European Cabinets, and if England withdrew her cruisers and soldiers from the West Indies, Canada, and Australia, it would strengthen rather than weaken her position in diplomacy. All historical lessons, the experience of naval manœuvres, and the conflict now raging in the Far East inculcate the lesson that concentration of expenditure on the vital elements of fighting force and concentration in their distribution, even though we thereby incur minor risks, is what goes to the winning of wars and the preservation of peace. There are different forms of concentration. You may concentrate on Alderney breakwaters, London fortifications, granaries, and Wei-hai-Wei's, or you may have a brand new conscript army for home defence. Unless we concentrate on what is vital it is all as glittering dust in the balance between peace and war. There is no case in history of an island being involved in a war in which it was not clearly shown that the one vital element was the sea communications of that island, and therefore naval force alone was what vitally mattered in the initial stages of the war. If the island possessed trans-oceanic territories this truth is only emphasised, for the one binding element must be the free flow of shipping along the sea roads. We must, however, remember the relative ineffectiveness of a Navy beyond the enemy's coast-line, and be ready to project artillery, cavalry, and infantry, so as to press home the blows delivered on the sea. Time and peace are, however, essential to the proper organisation of Armies and Navies. In telling us what nations we are to prepare against, it seems necessary to remind politicians that the experts do not possess any magician's wand by which Armies and Navies can spring Minerva-like into being. We are entitled to ask that we may prepare to-day for the probable situation five years hence.

A doctrine has now been promulgated that we should have a Conference for the limitation of naval armaments in spite of the ill-success which attended the Hague Conference, and the snub which Palmerston received from Napoleon III. when he proposed the limitation of armaments. I suppose the expert is to be elbowed out of this question by Parliamentary lawyers. As one who is not an expert, but a simple student, I venture to express an opinion. The proposal, to my mind, has this danger: It might easily trap us into placing our maritime power under the dispensation of a Hague tribunal. Unless we are very degenerate it will be even less to the taste of the British people to have their oceanic policy regulated by foreigners than to have the sweets of the tea-cup so controlled as at present.[1] It is easy to see from the Parliamentary discussion that the advocates of disarmament by agreement have in their minds battle-ships. Their

[1] The writer has advocated in the past an arrangement by which the United States and the British Empire will come to each other's rescue in the event of either being attacked by three Powers. This would limit the armaments of both Powers.

arguments are based on the idea that our battle-ship strength is solely regulated by the battle-ship strength of the Powers, and so it is to a very large extent *now*. But supposing foreign Powers were relieved of the incubus of building battle-ships (which is what a good many of them might like, since they cost 40 per cent. more in France and Russia than in Great Britain), is it not obvious that they would turn to the much cheaper torpedo craft and submarines, which are the enemies of the battle-ships? Our battle-ships would have to keep the sea and be weakened by the incessant attacks of these much multiplied craft, while, let us say, the German Fleet could remain secure out of long-range fire. As years pass by the old battle-ships would become less and less able to resist the attacks of the new and developed torpedo craft, and a war might then so thin their numbers down before we could exterminate their small assailants, that the Fleets of our opponents could emerge and gain the victory. It seems to me that the more developed the small craft are in quantity and quality—and the policy advocated by a number of M.P.'s of restricting the output of battle-ships would enhance the number of small craft by setting free funds for the purpose—the greater the necessity for a large margin of safety in the latest types of battle-ships, so as to provide for our supremacy in spite of losses due to the attacks of these small craft. During the fifteen years since the passing of the Naval Defence Act, we have averaged three battle-ships and five cruisers laid down annually, and if we are to keep the Navy as modern in the future as it is at present we must replace these vessels at about the same rate. Our programme for this year is two battle-ships and four cruisers, and we have now eight battle-ships building, as against fourteen in France and Germany. That the threat of torpedo craft against our battle-ships tends to increase is shown by the fact that, whereas France and Germany have 307 torpedo craft including submarines as against our 219, they have building or projected 163, as opposed to our 61. The rapidity with which destroyers and submarines—both new factors in foreign naval armaments since the period when the Liberals were in office—can be built, while the battle-ship takes about 2½ years, makes it more than ever necessary to resolve that we must never economise in battle-ships. We should remember the historical fact that the stronger sea Power, which keeps the sea for her protection, has always lost during a war through accidents of navigation more battle-ships than her enemies. Prior to St. Vincent, Jervis lost five of his ships through "acts of God." The disaster to the Japanese battle-ship "Hatsuse," through a drifting mine broken loose from the harbour defences of Dalny or Port Arthur, or possibly from the deck of the "Yenissei," must be classed in the same category.

I regard battle-ship strength as the indispensable condition of all economy in Imperial Defence. We require a margin of safety in the business of naval war as in the conduct of any other business. In a rope you have the strength of the material and the length of the material to provide for. If we wish to rope in our enemies, we must have strength in our individual battle-ships, by which we provide a tactical margin of safety for battle, and the length of the rope or the number of battle-ships gives us the strategical margin for distribution. We cannot, for instance, afford to let the Channel wait while we are doing our work in the Mediterranean. Only a nation which can lay up commerce can act like that. There is a lot of rubbish talked by opponents of the Blue-Water School about our fleets being freed to

operate elsewhere if we have a larger home defence Army. The circumstances cannot be suggested under which it would be desirable to leave this country without a fleet in home waters, near the converging points of its commerce, so the argument is without value. If the Navy is inadequate it is grossly extravagant, if sufficient it is a cheap insurance. In answer to some timid souls, I can only add that I hope to see the cost of a battle-ship rise considerably all over the world to about two millions sterling for each battle-ship. We were always hampered in our past maritime wars, when the cost was about £50,000, by the fact that nations like Turkey, Denmark, and Portugal could place fleets of battle-ships into the scales. It is the increasing cost which is driving France from the position of second naval Power.

Now, if we have the necessary battle-ship strength we also obtain:

1. Probable insurance of peace, which we cannot get from cruisers, soldiers, or forts—all necessary, but subsidiary.

2. Absence of all waste through War Office overlapping naval functions by providing inefficient substitutes for naval defence to resist invasion, or to ward off coastal attacks along 43,000 miles of British Empire coast line.[1]

3. Freedom to organise Army for offensive war, which greatly assists Navy. Had we done this in the eighties and nineties, it would have gone far to prevent the late disastrous war, or, at any rate, shortened it, and saved millions.

4. If our Army is to be of use it must be worked in the closest association with the Navy for war over sea, availing itself of the enormous power—commonly called amphibious power—of being able to choose its striking point. The Navy will give the Army freedom all along the coast to disappear at sea, and to re-appear when least expected. The Army must help the Navy, occasionally with men, but also to capture ships, as was done by the Japanese in the war with China, and by the Americans at Santiago. Fortifications for the ports along our 43,000 miles of British coast line should be limited to the barest necessities of the case, the guns and stores being of naval pattern, and to be requisitioned, if required, for naval use. Mercantile ports should be left without fortifications, and held as bait, in the hope that an enemy will disperse his cruisers to attack them. Coast defences can always be improvised in a few weeks, but the battle-ships, for which they are inefficient substitutes, take us some years to produce. There is no objection to guns being secretly

[1] This coast-line compares with 17,854 for the United States, 8,901 for France, 17,730 for Russia, and only 4,242 for Germany. The action of the Navy was excluded, it should be remembered, from the terms of reference of the Palmerston Commission on the fortifications of the dockyards and the Carnarvon Commission on Coaling Stations.

mounted after a war has broken out, so that having been induced to attack, an enemy may obtain more than he bargained for.

In connection with these supposititious raids, it is worth noting that critics frequently count cruisers twice over. For instance, France has not enough armoured cruisers to associate cruiser squadrons for look-out duties both with the Channel and Mediterranean Fleets. It is therefore very clear that she would have none to spare for raiding purposes. It results that she must either cripple her fleets or abstain from raids. Needless to say we should infinitely prefer to see her indulge in raids.

A question which I framed last year elicited the fact that on an average ten months have elapsed in Great Britain between the Parliamentary sanction of a battle-ship and its commencement. A further three years and two months were taken for its completion; thus four years elapsed. By close attention to standardisation and organisation, I think that this interval could be reduced to less than two years. If, then, foreign relations can be forecasted with greater certainty over two years than four years, it might be possible to work with a smaller margin of safety when this degree of rapidity is attained. In addition, we should obtain more services out of the vessels before they become obsolete.

I desire at this point to protest against the doctrine that we should be able to man every ship we build. All experience proves that the waste of material in naval war is far greater than the waste of *personnel*, and I see a positive gain in building beyond our manning resources.

In appealing to business men, one naturally turns to considerations of expenditure. I ask if it is reasonable to adopt the advice of the Norfolk Commission, and spend at least 10½ millions a year on a conscript Army for home defence because of "the off-chance" of the Channel and Home Fleets failing? The battle-ships of those two fleets could be multiplied four times for the cost of this Army,[1] and

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[1] This calculation allows for interest on first cost, replacement, and manning, as well as all incidental expenses. As I have pointed out, it is not necessary to man all the vessels.

Cost of a Battle-ship.

	£	
Interest on first cost	30,000	(approximate)
Depreciation (for a life of 25 years)	40,000	(approximate)
Crew	40,000	
Victualling	14,500	
Coal	23,500	
Stores and Repairs	9,500	
Ordnance Stores	5,500	
Total	163,000	

	£
Cost of eight battle-ships	1,304,000
Cost of sixty-four battle-ships	10,432,000

the Admiralty state that the fleets as they stand are sufficient to guarantee the country against invasion. At the very best the argument for a home defence Army can only be compared to the tactics of a football team if three-fourths of the team are stationed in the goal.

I would ask those of you who are shipowners, bankers, underwriters, and leaders of commerce and industry to bear in mind that there are no certainties in naval war any more than in business, and that you are bound to give to naval officers a margin of safety strategically in numbers and tactically in the superiority of the average battle-ship. You cannot do without the margin of safety unless the enemy is as hopelessly demoralised as in our last maritime war. At St. Vincent we pitted 15 battle-ships against 27, and in the Trafalgar campaign we started the year with 77 battle-ships in commission to the allies' 71; we ended it by pitting 27 against 33. In the one case an admiral commanded who endeavoured to wean his countrymen from the waste of expenditure on passive defences; in the other, the victorious Nelson, whose advice was ever a refrain of his emphatic assertion that only "numbers can annihilate." More than ever in the interests of commerce it will be necessary to deal diplomatically with the neutral Powers in maritime war. Diplomacy will be of no avail unless we have a reserve force of battle-ships, or what is spoken of as a margin of safety. In suggesting that you confine your attention, in the first instance, to our battle-ship strength, I would remind you that even the defence of commerce depends upon battle-ships. Why otherwise were the insurance war risks for the Mediterranean, which were £23 15s. per cent. before the battle of Trafalgar, dropped after that battle nearly £19 per cent? It was because the battle-ships had had their say. The great military forces which had invaded our domain, the sea, had been swept away by the battle-ships, and we had only to police our sea territory after that against the independently acting marauders, a risk which, like motor car accidents and burglaries, we can take with philosophic calm. Now even a £10 per cent. premium on the values of all our cargoes would mean £90,000,000 per annum expenditure on insurance against war risks of the cargoes.

I believe the two-Power standard has not more than five years' lease of life if the present haphazard policy, involving a great deal of reckless expenditure, is persisted in. In eight years the expenditure of the country has increased by 45 millions sterling. The greater part of this increase has been brought about by the alleged necessities of Imperial Defence. It is childish to pretend that it can be borne without detriment to the prosperity of the nation, and therefore to her maritime supremacy. The first requirement is to know what has to be defended, the second how to defend, and the third is to make the necessary provision as economically as possible. Not one of these questions has been faced in Parliament, where matters have been considered in water-tight compartments, with scarcely a thought of the extraordinary anomalies I have endeavoured to bring before you in this lecture. Imperial defence is too serious a matter to be trifled with for political considerations. The sceptre of the sea is really held by Parliament, and that body must brace itself to the task of organising our defence on broad Imperial lines.

APPENDIX A.

The following embrace different foreign estimates as to our relative strength in battle-ships:—

——	A. 1903.	A. 1904.	B. 1902.	C. 1898.	D. 1903.	D. 1904.	E. 1908.
United Kingdom	48	55	61	20	18	59 & 6	57
France	31	33	36	7	10	26 „ 20	29
Russia	20	20	32	4	8	25 „ 12	29
Germany	14	19	25	0	9	22 „ 16	23
United States ...	12	14	26	Not given.		22 „ 12	25

a. Allowance should be made in 1903 for two battle-ships purchased by the United Kingdom. The estimate includes battle-ships ready in the year named, and not more than 25 years old. (Authority, the German *Taschenbuch der Kriegsflotten.*)

b Battle-ships of over 5,000 tons and not more than 25 years old. (Authority, the German *Nauticus.*)

c. The French Budget Commission's estimate for completed first-class battle-ships only.

d. The first figure includes battle-ships built and building of about 10,000 tons or more displacement, which are less than 20 years old with a few exceptions in the case of reconstructed vessels with a modern armament. The second figure gives other battle-ships and coast-defence vessels. (Authority, the Report of the House Committee on Naval Affairs of the United States.)

e. The estimate of the German *Taschenbuch der Kriegsflotten.*

Estimates of Relative Naval Strength.

Mr. Pretyman in the House of Commons, 16th May, 1904:—The total number of battle-ships built and building for Great Britain in 1900 was 70, including 23 second and third-class. In 1904 the number was 65, including six second and third-class. The total number for France and Germany combined was 57 in 1900, and 74 in 1904. There are now in commission away from European waters five battle-ships belonging to Great Britain and one belonging to France.

The relative strength in first-class battle-ships and other classes to-day and in the future, is estimated by the "Naval Annual," as follows ("Swiftsure" and "Triumph" transferred from building to built):—

——	England.	Germany.	United States.	France.
1904 { built	40	14	11	11
1904 { building	8	8	13	6
End of 1905—built	41	18	12	11
„ 1906 „	45	20	17	13
„ 1907 „	48	22	24	17
Present position—2nd class battle-ship...	11	0	0	10
„ 3rd „ „	6	13	11	10
„ and coast-defence vessels ...				

The Parliamentary Return of Fleets, estimates the position as follows (counted for battle-ships since laid down):—

	England.	Germany.	United States.	France.
1st class battle-ships { built	51	14	11	20
1st class battle-ships { building ..	8	8	11	6
2nd class „	4	4	1	9
3rd „ „	2	12	—	1
Armoured coast-defence vessels ..	1	11	11	14
Armoured cruisers { built	28	4	2	15
Armoured cruisers { building ..	13	2	11	6

I object to the phrase "the Fleet," for no sensible man can suppose we defend our interests with a single fleet. In 1801, when we sent a fleet to Copenhagen, we did so without weakening our Channel and Mediterranean Fleets.

The evidence given by Lieut.-General Sir William Nicholson, K.C.B., the then head of the Intelligence Department, before the Duke of Norfolk's Commission on the Militia and Volunteers contains the following passages:—

The Question of Invasion.

Transport to England.

Question.—I want to ask you a few questions about this War Office Paper. Paragraph 4 says: "The strength of the hostile force which, having regard to the existing balance of sea power, could be landed in this country is a matter on which there is a diversity of opinion. It is held by some that the Navy can guarantee the complete protection of the United Kingdom against the danger of invasion by any larger force than from 5,000 to 10,000 men." What does the word "some" mean? Does it mean the Admiralty?

Answer.—Yes.

Question.—We may take it that that is the view of the Admiralty?

Answer.—That is the view of the Admiralty.

Question.—Is it also the view of the War Office?

Answer.—No, it is not the view of the War Office.

Transport from England.

Question.—Could not any military contingent be sent abroad under that time [four to six months] if war were declared?

Answer.—I do not think so, in the case of a large force, without incurring considerable risk. I imagine that that would be the view of the Admiralty, even if they put it at as short a period as four to six months, that is to say, in the event of a very serious war with a strong naval Power or with one or more—with two strong maritime Powers . . . I imagine, taking the instance of the South African War that if we had been at war with a Continental Power at the time, it would have been a somewhat hazardous business, until we had gained absolute sea command, to send any large reinforcements from the United Kingdom to South Africa.

MEMORANDUM OF THE COLONIAL DEFENCE COMMITTEE, JUNE, 1890.

"On account of their geographical position and of the now considerable population of all these colonies, except West Australia, there is no British territory so little liable to aggression as that of Australia. In view of the armed forces maintained, and the strong spirit which animates them, territorial aggression, except on a large scale, is out of the question. To endeavour to place small bodies of troops on shore would be to court disaster, with consequent injury to the prestige of any Power which attempted such a policy. Any force destined for aggression, even if safely landed, must be of a strength sufficient to conquer and hold either an important strategic point or a considerable portion of territory under the certain condition of losing its communications by sea. . . . It is evident that transport for a large expeditionary force could not be prepared in any of the advanced bases of any Power without the fact being known, when a corresponding redistribution—if necessary—of the British Navy could be made.

Such an expedition, whether despatched from an advanced base or from Europe, could not hope to reach its destination until the British Navy had been definitely worsted. Even then the difficulties and the risks would be so considerable that, in view of other enterprises of a more hopeful nature, it is almost inconceivable that the attempt should be made. History affords no parallel of such difficulties successfully overcome."

M. XAVIER RAYMOND on the Navies of France and England in 1862:—"The sea is especially the national business of Englishmen; it is the focus towards which all the ardour of a patriotism vivified by the pure and wholesome spirit of liberty converges; this is not the least cause of her power. The superiority which England possesses financially, her means of material production, and the number of her maritime population, are also but small matters in our eyes, compared with the moral force imparted to her as the most free and united nation in the world.

And at the same time with these occurrences in Manchester and Lancashire, what has been called the Volunteer movement follows its steady development. The motives which determined this national arming do not appear to us well founded—in our eyes the alarm was imaginary; it is not the less true that we should be impressed with the sincerity and ardour of that patriotism which arms itself even to resist chimeras."

APPENDIX B.

OPINIONS OF STATESMEN, ETC.

Lord ESHER, Sir JOHN FISHER, and Sir GEORGE CLARKE, in issuing their first report, 11th January, 1904, said:—"Our national problems of defence are far more difficult and complex than those of any other Power. They require exhaustive study over a much wider field. The grave danger to which we call attention remains, and demands effective remedy. The British Empire is pre-eminently a great naval, colonial Power. There are, nevertheless, no means for co-ordinating defence problems for dealing with them as a whole, for defining the proper junctions of the various elements, and for ensuring that, on the one

hand, peace preparations are carried out upon a consistent plan, and, on the other hand, that in time of emergency a definite war policy based upon solid data can be formulated. It would be easy to show that unnecessary weakness coupled with inordinate waste of national resources thus results."

On 1st March, 1904, Parliamentary Debate, Sir EDWARD GREY said:—"In 1885 the standard set and maintained by Mr. Gladstone's Government was to lay down two ships for every one ship laid down by the French Government. Under the Naval Defence Act, the standard changed, and there came the two-Power standard. That standard must not be taken to apply to any two Powers in particular, but to the two Powers which at the time of speaking had the largest Navies. The origin of the rivalry was France. If the happy relations which existed to-day between ourselves and France had existed in previous days, was it quite certain that the French rivalry would have been so great, and was it not possible that, taking France as the second naval Power in the world, if the good relations which now existed between her and ourselves were maintained it might have a beneficial result in reducing the rivalry between these two nations, and therefore of reducing the two-Power standard?

Lord BRASSEY (Observations on the Navy Estimates, 1903-4):—"The wide extent of the British Empire, and the necessity of giving protection to commerce of immeasurable value, extending to every sea, impose on the Admiralty a responsibility such as falls to no other administration, and justify naval expenditure largely exceeding that of the other maritime Powers of Europe. Confidence in the patriotic resolve of Parliament to deal in no niggardly spirit with naval requirements should not, however, discourage those concerned in naval administration, whether from within or from without, in the effort to cut down expenditure where it is least necessary. To maintain naval forces, consisting of vessels useful only for peace services, in waters where we have no rivals, is a waste of money."

Mr. ARNOLD-FORSTER (House of Commons, 14th May, 1903. The Navy Estimates.):—"If they had not a Navy which would do this work, and not only go into action, but come out of it successful, it was far better not to have a Navy at all. The duty of the Admiralty was, as he understood it, to give a guarantee to the nation, in the circumstances that existed, that they were prepared to guarantee the country against attack, and, what was much more important, from defeat, by any combination of Powers with which they might reasonably expect to be at war."

Lord CARNARVON, 1878:—"We lavish on what is obsolete, save on what is essential, and always think that our past good luck is a guarantee of future success."

Sir MICHAEL HICKS-BEACH, in his speech at the Colston banquet, reported in *The Times*, 14th November, 1900, said he "repeated what he had said already, that our naval power was vital to England, and that the maintenance of that power must come in our minds before any other conceivable expenditure. Our naval power must be maintained relatively to the naval power of other countries, and he thought they would see at once that our expenditure upon the Navy must necessarily increase."

Lord SALISBURY, 1900:—"The exercise of the Treasury's powers in governing other departments of the Government is not for the public benefit."

Sir H. CAMPBELL-BANNERMAN (House of Commons, 10th March, 1903):—"The only way that I know of in which the House of Commons can promote a reduction and can insist upon economy is by saying that a large sum shall be reduced, and leaving it to the Minister, with his professional advisers, to say how that reduction shall take place."

Governor POWNALL was the chief advocate in Parliament of the discontented colonists, and in criticising Adam Smith's "Wealth of Nations," on its issue before the War of American Independence, he wrote that restrictions of trade should be diminished, "always, however, keeping in view this object and end—namely, that so far as our colonies have to be considered as an institution, established and directed to increase the naval force of our maritime Empire, and so far as that force derives in any degree from the operations of their commercial powers, so far that monopoly which engrafts them upon our internal establishment is indispensable, and ought never to be departed from or relaxed."

PITT's justification of the peace of 1783:—"A defensive war can only end in inevitable defeat."

Baron PORTAL, French Minister of Marine in 1819, when French finances were so bad, said of the French Navy:—"You must either abandon the institution to save expenditure, or increase expenditure to preserve the institution." He carried the day.

PITT on the economies in the Navy after the Peace of Amiens, 1802:—"With all my respect, nay, affection, for the new military system, our naval defence is that on which we should chiefly rest our hopes. Our Navy is the grand and proud bulwark of our fame—that Navy which has extended our commerce, our dominion, and power to the most remote parts of the world—that Navy which has explored new sources of wealth, which has discovered new objects of glory. Let us therefore augment, rather than diminish, the pride of the nation, and let us not be referred back to dry periods of history, when all comparisons are absurd and unavailing. Let us watch with greatest jealousy and circumspection the rise and progress of the new marine of France, so dangerous to the interest and glory of this country. Let us watch France more actively than in former times, because she has attained new and extraordinary energies. Her present exertions are unprecedented in history."

Treasury Minute, 1st December, 1858, Appointing Committee to investigate the Navy Estimates and the relative strength of the British and French Navies:—"Whatever may be essential to the maintenance of the Naval supremacy of the country, must be secured as a matter of paramount necessity; and the amount of force requisite for that purpose must be decided on the responsibility of the Cabinet, and cannot be delegated to any other authority."

Lord SANDWICH, letter to Rodney:—"The fate of the Empire is in your hands."

The Duke of DEVONSHIRE:—"The maintenance of sea supremacy has been assumed as the basis of Imperial defence. This is the

determining factor in fixing the whole defensive policy of the Empire." 3rd December, 1896.

Mr. H. H. ASQUITH, M.P., at Leven, 7th October, 1902:—"The moment we lose command of the sea this country will be at the mercy of the enemy."

Lord GEORGE HAMILTON (speech introducing the Naval Defence Act of 1889):—"I think I am correct in saying that that idea has been that our establishment should be on such a scale that it should be at least equal to the naval strength of any two other countries. For the purpose of meeting unexpected blows we should have a considerable margin of reserve."

Sir H. CAMPBELL-BANNERMAN:—"I accept in fullest and most complete form the doctrine that it is necessary for this country to hold the supremacy of the seas. I accept the doctrine of standard of supremacy that our fleet should equal any two other fleets in the world."

Lord SPENCER:—"We are a peaceful nation, and we wish to remain on good terms with our neighbours; but I venture to say that the best policy for this country is to maintain a powerful Navy, and in doing so we shall promote the best interests of the country." Speech at Cutlers' Feast, Sheffield.

Sir CHARLES DILKE (*Naval and Military Record*, January, 1902): ". . . . . If, however, France and Russia joined in some common quarrel against us, it would either be because they thought they had at least the tacit support of Germany, or it would be under circumstances which would expose us to demands on us by Germany which it would be difficult or impossible to meet. If Germany in such a war were not to be in a position which would force us to count her as possibly hostile to ourselves, then she would be in a position friendly to ourselves; and in such a case the war would not begin at all. In other words, whenever we have to prepare to fight France and Russia we shall have to take into our consideration Germany as well. The danger is probably remote—remote, that is, as politics go—but it is not the less real, and it is so difficult to rapidly make up leeway in connection with a great fleet, that there is every reason for keeping up at least to the relative level of construction that we have attained. The manufacture, for example, of the latest improved armour-plate is a matter involving such large expenditure of capital in new machinery every few years that it is essential that we should look many years ahead in naval construction. And gunnery science also supplies us with many facts which point in the same direction. The French are at all times somewhat our superiors in connection with scientific gunnery, and we have indeed to be watchful not to be left hopelessly behind in the gunnery race."

Lord ROSEBERY:—"We spent three millions on the Navy when a quarrel occurred with Spain in 1790, and to this was due our successful diplomacy." Concerning this, Lord Rosebery says, in his "Life of Pitt": "The heaviest peaceful expenditure of this sort is much less costly than the smallest European War."

Mr. ARNOLD-FORSTER (in the House of Commons, 22nd February, 1902):—"He preferred to take the view that had been taken by the First Lord, and to say that their duty was to have a naval force which

should certainly not be less than the standard of two other Powers, and should be equal to any reasonable emergency with which we might expect to be confronted. This of course involved a power not only equal to, but in excess of, the standard of two Powers."

Lord ROSEBERY (in the House of Lords, 24th March, 1903):—"We are all agreed that our policy is that of a maritime Empire, that the Fleet is our great weapon of offence and defence, that we must make it as perfect and as powerful as our brains and our money can do it, for if that fails us, it is a matter of life and death. It is not 30 *corps d'armée*, it is not 40 *corps d'armée* that would redress the balance of defeat if Great Britain, through some calamity—which God avert—were swept from the seas. These are principles which are all agreed upon in this House, except, perhaps, by those who represent the War Office. But there is one word I should like to say with respect to this matter, and it is that I think we are all agreed that we would not spare one shilling on the Navy Estimates to make the Fleet as efficient as possible. And I would go a step further than that. I believe in every shilling we give to the Navy, or the millions which the Navy claims, we are giving it to a department which will spend the money well."

Mr. JOHN MORLEY, M.P. (Manchester, 8th November, 1893):—"Everybody knows, Liberals as well as Tories, that it is indispensable that we should have not only a powerful Navy, but I may say an all-powerful Navy."

Lord SELBORNE:—"I would say that the Navy ought to be so strong that it can have a reasonable certainty of success in the performance of any duty which it is reasonably probable it will be called on to perform."

Lord SALISBURY (in the House of Lords on the Naval Defence Bill, 1889):—"It is impossible to contemplate what the issue of the first collision might be, and our only safety is in having a large reserve force, because if we stake our command of the sea on the result of an engagement, or even on a succession of operations, we should be placing in danger interests so vast that it is terrible to think of them; and we might encounter calamities which generations might not undo."

Mr. GERALD BALFOUR (in the House of Commons, 28th January, 1902):—"It is sufficient for the country if it have a Navy adequate for its needs, and if we have not such a Navy, it is not an enquiry that is needed, but rather the impeachment of a Government which has neglected an obvious and essential duty."

Lord SELBORNE (the House of Lords, 6th March, 1903):—"He asked their lordships to take this as the starting point: that the true defence of this country and of the whole Empire was its naval power, and the invasion which they had to contemplate and take into reckoning in connection with the military system was only such an invasion as was possible so long as our naval power remained intact. He was not going to proceed from that basis to consider how many Regular troops must be kept in this country for the purpose of repelling such an invasion; and why? Because he believed that they should begin at the other end and calculate what was the number of Regular troops they would require for the Imperial defence of the Empire outside this country. They had to provide a garrison for all the coaling stations and the ports we hold. They had to provide a

garrison for South Africa. They had to provide that force which was always sooner or later required for minor expeditions. And, beyond and above all this, they had to provide for the defence of India. When they calculated on the basis of those requirements they would find that the number of Regular troops required in England to fulfil Imperial obligations was amply sufficient, with the Auxiliary Forces, to deal with such an invasion as he had suggested."

Lord GOSCHEN (in the House of Lords, 5th July, 1901):—"My noble friend's (Lord Selborne's) view of what the standard should be was somewhat vague. I would say that it should be a two-Power standard at least, but with a margin. I would only say, if my noble friend would bear in mind, that it is a useful thing to have at least a minimum; but whether that minimum is sufficient is a matter which the Government must most carefully examine, not only with reference to two Powers with which we might be engaged, but with reference to the standard generally, and the increasing naval forces of other Powers."

Mr. RITCHIE (30th April, 1903):—"With regard to the Navy, a strong fleet is for us not a matter of advantage or convenience only. It is not a mere gratification of national pride. It is for us a matter of life and death. It is not an instrument of agression; it is a safeguard of national existence, and more, it is not a matter, I am glad to think, of party controversy. Our trade and commerce, and the trade and commerce of our Colonies, our supply of food and raw material, the employment of our people, all depend upon our supremacy at sea, and to preserve this we will grudge no cost. Certainly, so far as I am concerned, I will never be responsible for crippling the efficiency of our Navy by refusing to find the means for maintaining its command of the sea. Cobden once declared that he would spend a hundred millions to maintain the irresistible supremacy of our Fleet, and there is not, I feel sure, any responsible body of persons who would not be prepared to agree with Cobden. Our naval preparations are no menace to any foreign Power."

Lord SELBORNE (18th March, 1902):—"What we want are more ships, and every penny that is spent in bricks and mortar and land fortifications which could be spent on more ships is money unnecessarily and badly spent. Every garrison that we have to lock up hundreds and thousands of miles away from this country is an evil, very often a necessary evil, but an evil to be reduced to the smallest dimensions possible. The number of these bases and the money spent on them should be limited in the strictest manner to the absolute necessities of the Navy."

BISMARCK:—"If we stake the blood of our soldiers and sailors, we are also bound to provide them with the best weapons of offence and defence which money can procure."

COBDEN'S letter to Lord John Russell, 2nd August, 1860:—"So far am I from wishing that 'we should be unarmed,' and so little am I disposed to 'place my country at the mercy of France' (to quote the language of your note) 'that I would, if necessary, spend one hundred millions sterling to maintain an irresistible superiority over France at sea."

In another letter Cobden wrote:—"If an enemy is our master at sea so as to be enabled to land an army and keep open his communi-

cations, he is capable of blockading us and starving us into subjection. We are like a garrison afloat, and our existence depends on our communications by sea being kept open."

Sir John Colomb (Parliamentary debate, 14th May, 1901):—"A few years more study and thought will give him (Mr. Winston Churchill) a better conception of what the position of the country would be in a maritime war. A superior fleet, by operating on the offensive, bottles up the fleet of the inferior Power. Naval power stops there; even a few attacks here and there upon our commerce must have the moral effect of enormously increasing our rates of insurance, and enormously increasing the difficulties of our competition in the world's markets, and that means an enormous economic strain upon this country. That would be an intolerable strain, and unless you have an Army adapted to the nature of the attacking work it must do, you cannot bring that intolerable strain to an end."

Sir John Colomb, M.P., in his pamphlet in 1867, said:—"For the reasons we have briefly given it is evident that the safety of the Channel must be maintained, and that it is worse than useless to distribute the forces for the protection of our commerce over various parts of the world, while the base of our naval operations, the most vital spot in our commercial system, remains insecure. As this involves the employment of a large sea-going fleet for Channel service only, it is advisable to ask the question: Will not a fleet sufficient for this purpose be equal to the task of protecting England from invasion?"

Opinions of Soldiers.

Lieut.-General Sir Evelyn Wood (10th January, 1893, discussing Admiral Colomb's paper, "The Command of the Sea,") said:—"I must first of all observe that we soldiers are more modest than sailors, and we never attempt to tell a sailor, for instance, how many ships he should have. They ask for so many, and we pay the taxes; but with the Navy, as a Navy, we never interfere. It is unkind, therefore, for the lecturer to lay down for us what defensive preparations we ought to make for the Army."

(The above is merely quoted as illustrating a curious desire, responsible for much waste, to consider matters of defence in closed compartments.)

General Sir F. Maurice (in "The Balance of Military Power in Europe"):—"Whether our Navy can, at this moment, crush or confine the now nearly ready Russian Fleet in the Black Sea, and at the same time, with the assistance of the Italian Fleet, dominate the Mediterranean and the Baltic, while it secures our commerce, our shores, and our Colonies from attack, we do not know. From a military point of view those are the services it ought to render us. Till it can accomplish them with certainty we cry, with General Ricci, all for the Navy and nothing for the Army."

(The above should of course be read in the light of modern conditions, when we have no Italian alliance.)

Lord Wolseley's evidence before the Norfolk Commission, 1903:—Q. 1,459. "I eliminate the action of our Navy from this calculation, for, of course, the invasion of England is only possible after a heavy naval defeat, or when our Navy has been decoyed from the Channel,

and I believe both are contingencies that must be provided against. I know how difficult it is to win a battle on shore, and what the dangers and risks are, *pro* and *con*, on land, and how much greater they always have been and always will be and must be on the sea, and I therefore think it would be living in a fool's paradise were the English people to depend exclusively on the Navy for the defence of this country from invasion. We have the greatest and the best Navy in the world; Napoleon had the greatest and the finest Army in the world, and yet it was utterly destroyed at Waterloo."

On 15th March, 1889, Lord Wolseley said at the annual dinner of the Institute of Civil Engineers, that, "looking at a map, one saw many places and spots, where fortifications existed, garrisoned by the Army, at the expense of the British taxpayer, for the protection of the Navy."

NAPOLEON:—"It was bad policy to encourage the military mania instead of sticking to your marine which is the real force of your country, and one, which, if you preserve it, will always render you powerful."

OPINIONS OF SAILORS.

Report of the three Admirals on the Lessons of the Naval Manœuvres, 1888:—On the 21st November, 1888, a committee, consisting of Admirals Sir W. Dowell, Sir Vesey Hamilton, and Vice-Admiral Sir F. Richards, reported to the Admiralty on the Naval Manœuvres of that year. It is a report marked by unusual directness of language, in which the issues are very plainly stated, while it exercised a great influence on British naval policy, so we quote some paragraphs:—

"The main lesson which these manœuvres emphasise is that Great Britain, whose maritime supremacy is her life, is very far from being as strong as she should be on the seas, either in *personnel* or *matériel*. . . . We are decidedly of opinion that no time should be lost in placing her Navy beyond comparison with that of any two Powers.

"England ranks among the great Powers of the world by virtue of the naval position she has acquired in the past, and which has never been seriously challenged since the close of the last great war.

"The defeat of her Navy means to her the loss of India and her colonies, and of her place among the nations.

"Without any desire to question the sums annually granted by Parliament for the maintenance of the Services, we cannot but note the disproportion in the appropriation when the magnitude of the issues involved is taken into consideration.

"It would, in our opinion, be far more in consonance with the requirements of the nation by the provision of an adequate fleet to render invasion an impossibility than to enter into costly arrangements to meet an enemy on our shores (instead of destroying his 'Armada' off our shores), for, under the condition in which it would be possible for a great Power to successfully invade England, nothing could avail her, as, the command of the sea once being lost, it would not require the landing of a single man upon her shores to bring her to an ignominious capitulation, for by her Navy she must stand or fall."

Letter of Admiral Sir COOPER KEY, First Sea Lord of the Admiralty, to Admiral Sir Geoffrey Hornby on the Naval Programme

of 1884:—"If you had seen what I have written, heard what I have said at the Board, you would know how I have been disturbed about the absurdly small sum the Government are asking for—I have scarcely slept for the last five nights, having been so worried about it."

Admiral COLOMB, *United Service Magazine*, June, 1892:—"As to raids on territory, history teaches us only how common they have been in the hands of the force that commands the intervening sea, and how rare and uniformly futile they have been in the hands of the inferior force."

DUNDONALD.—"The Autobiography of a Seaman.":—"The true fortification of England is to be always in a position to strike the first blow at sea the moment it may become necessary. To neglect to do so would, under any circumstances, be folly. To be unprepared for it—national suicide."

NELSON on the French Invasion Plans, September 2nd, 1801:—"The threat of invasion is still kept up, and the French are trying to make their grand collection of boats at Boulogne, but I find it difficult to believe that they can ever get half way over."

NELSON:—"The requirements of the country demanded that the enemies' fleets should be annihilated, and it is only numbers which can annihilate."

Admiral COLOMB:—"We cannot have an efficiently-drilled, cohesive Army if we shut up our military forces in the detached garrisons over the world. It does not appear to me to be of any use saying that defence by the fortifications of ports and defence by a moving Navy must go hand in hand. Were they both under the same administrative control, which could only be naval control, with any reason, they might be dealt with side by side, though I do not think even then they could be said to go 'hand in hand,' but as we stand they are rivals for the open palm of the Chancellor of the Exchequer, and nothing is to be gained by not recalling the fact and stating it plainly. The reason of the thing and the history of the thing come to my mind with a plain conviction that fortification of forts is but an inefficient substitute for their naval defence, and that as we propose a naval increase we should logically propose a fortification decrease."

ST. VINCENT. Letter of 17th July, 1818. (The context shows that St. Vincent wanted the marines in the dockyards and Colonies in order to be able to use them afloat.):—"It is of great importance to our country that the public should be kept alive upon the subject of our monstrous Army, in a series of letters to *The Times* newspaper, showing that the marine corps is best adapted to the security of our dockyards; and that no soldier, of what is termed the Line, should approach them; our Colonies ought to have no other infantry to protect them, and the corps of Marine Artillery should be substituted for the old artillery."

RALEIGH:—"But making the question general whether England without the help of her Fleet would be able to deter an enemy from landing, I hold that it is unable to do so; and I therefore think it most dangerous to make the adventure. To entertain them that shall assail us with their own beef in their bellies, and before they eat of our Kentish capons, I take it to be the wisest way; to which His Majesty, after God, will employ his good ships on the sea, and not trust in any entrenchment on shore."

Lord CHARLES BERESFORD:—"To make the British Fleet equal in fighting strength to its possible enemies it should be numerically superior by at least one-third, taking classes of ships in their order."—Programme of 30th March, 1893.

Admiral Sir G. HORNBY. (Speech at Cannon Street Hotel, 5th June, 1888):—"I fancy some people will say—'You a British Admiral and not content to meet your enemy on equal terms!' Yes, I am that admiral, and should never be content to meet any enemy in equal force, if, by any possible efforts or prevision, I could meet him in superior force. And for this reason, that to do so would be to infringe the first principles of warfare."

TORRINGTON:—"My Lords, I know my business, and will do my best with what I have, but pray remember it is not my fault that the fleet is not stronger. I own I am afraid now, whilst the danger may be remedied, and you will be afraid after when it is past remedy."

OPINIONS OF PHILOSOPHERS, ECONOMISTS, AND HISTORIANS.

BACON:—"It were better to meet some dangers half-way, though they come nothing near. . . . Extraordinary expense must be limited by the worth of the occasion. A man had need, if he be plentiful in some kind of expense, to be as saving again in some other."

Sir ROBERT GIFFEN, in a letter to *The Times*, 7th January, 1901, said:—"Having built in a few years the reconstructed Fleet we now possess at a cost of over £100,000,000, we shall have to go on reconstructing at a cost of not less than £15,000,000 per annum for repairs and renewals together. The mere possession of the Fleet commits us to this vast expenditure, apart from additions that may be needed in competition with foreign Fleets, or incidental to the growth of the Empire in population and wealth."

Sir SPENCER WALPOLE ("The Life of Lord John Russell," period, 1848):—"The great steam fleet which was to serve his (Louis Philippe) purpose as an invader could not afford him one little vessel in his flight, and the monarch was about to seek refuge in a country whose liberties the alarmists had thought he was about to destroy. . . . . So ended the first of what Mr. Cobden used to call 'the three panics.' The pendulum of public opinion had violently vibrated from panic to parsimony, and the dread of additional taxation had quenched the desire for increased armaments."

MACAULAY (period Charles II.):—"The House of Commons, even when most discontented and parsimonious, had always been bountiful even to profusion where the interest of the Navy was concerned."

M. GUIZOT:—"A people who can understand and act upon the counsels which God has given it in the past events of its history is safe in the most disastrous crisis of its fate."

Captain MAHAN, 24th May, 1894:—"In maintaining the strength of the British Navy, I consider, lies one of the best hopes of the peace of the world."

In the "Invasion of the Crimea" KINGLAKE says of the futile bombardment of Sebastopol:—"The renown of our Navy was a treasure unspeakably precious. By our whole people, and, above all,

by an English admiral, it deserved to be guarded with jealous care, for if it be certain that the very life of England depends upon the strength of her Navy, it is also true that the strength of her Navy is in some sort dependent upon its sense of power, and, again, that that sense of power must always depend in part upon the sacred tradition which hands down a vague estimate of the things our Navy has done, and the things it has failed to do. At the time I am speaking of, it was less than ever right that, for mere policy's sake, the warlike renown of our Navy should be made to suffer. France watched with the knowledge that, in matters of naval ascendancy, our loss must needs be her gain. But also there were reasons of another kind for taking full care that the momentous duty of upholding our naval renown should not be made second to any ephemeral policy."

Sir WALTER RALEIGH:—"He that rules the sea rules the commerce of the world, and to him that rules the commerce of the world belong all the treasures of the world and, indeed, the world itself."

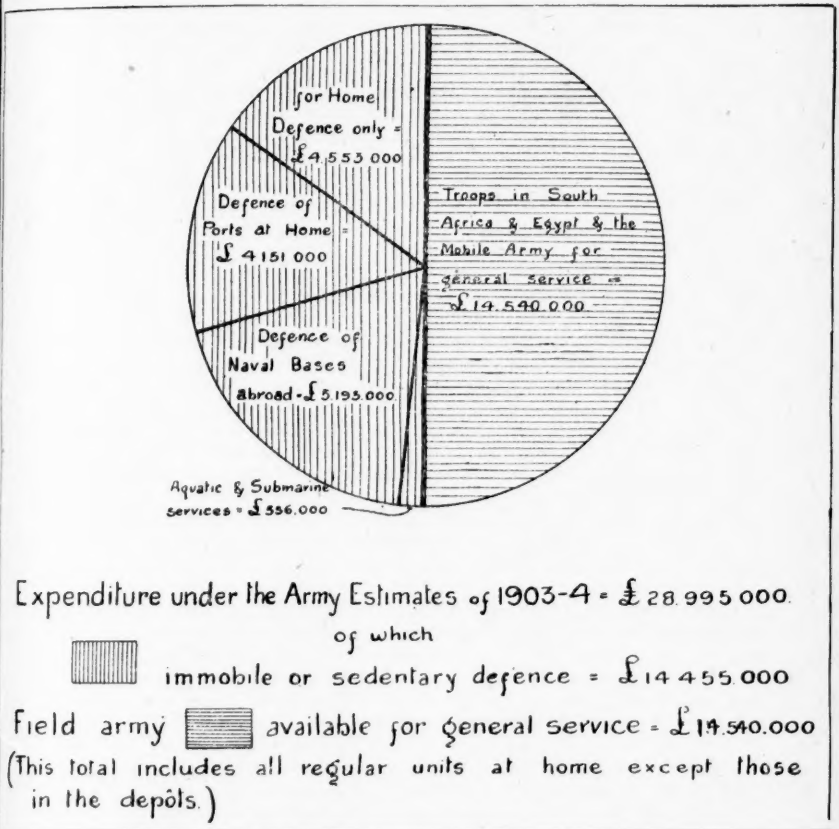
FOREIGN POLICY AND ALLIANCES.

Baron Marschall VON BIEBERSTEIN, the German Secretary of State for Foreign Affairs, said in the Reichstag on 16th November, 1896:—"It is to be anticipated that the developments of our trans-oceanic interests will in future afford us an opportunity of proceeding in agreements with the same Powers (France and Russia) with which we co-operated last year."

Sir CHARLES DILKE (in the House of Commons, 21st February, 1903):—"When that standard was last defended in the House, Mr. Goschen again and again said England would not fight alone, alluding to an understanding between this country and Italy as regarded an alliance between the Italian Fleet and our own. Mr. Goschen consequently defended the two-Power standard by the consideration of the assistance of the Italian Fleet and the even greater assistance of the Italian ports. But the Notes exchanged in 1888, which formed a virtual alliance between England and Italy, had been replaced by something entirely different. There could be no doubt that the recent arrangement between France and Italy made the neutrality of Italy in a contest the best this country could hope for. The present, therefore, was not a moment in which to propose to cut down the expenditure on the Navy."

Lord GOSCHEN (the House of Lords, 24th March, 1903):—"People ask why we have gone beyond the two-Power standard which has hitherto been considered sufficient. In proportion, as other nations increase their Navies, though they are not likely to be ranged against you in actual warfare, any prudent Government must take into account their existence. You have to assert your rights against neutrals, and the South African War was enough to teach us that in time of war most troublesome questions may arise with neutrals. It would be an unsatisfactory position for this country if, when it was engaged in a life-and-death struggle with two Powers, it had no reserve to watch those neutrals who might raise difficult questions."

GLADSTONE (1878):—"The strength of England is not to be found in alliances with great military Powers, but is to be found henceforth in the efficiency and supremacy of her Navy."


for Home Defence only = £4,553,000
Defence of Ports at Home = £4,151,000
Defence of Naval Bases Abroad = £5,193,000
Troops in South Africa & Egypt & the Mobile Army for general service = £14,540,000
Aquatic & Submarine services = £556,000
Expenditure under the Army Estimates of 1903-4 = £28,995,000
of which
immobile or sedentary defence = £14,455,000
Field army available for general service = £14,540,000
(This total includes all regular units at home except those in the depôts.)

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The CHAIRMAN (The Right Hon. Sir Edward Grey, Bart., M.P.):—I hope to be able to stay for a great part, at any rate, of what I am sure will be a most interesting discussion following this very interesting and suggestive paper, but I may have to return soon to that Parliament to which Lieutenant Bellairs has alluded in the concluding sentences of his address. I think his paper is not only a very valuable one on a subject of very great importance, but a very timely one, because, if I understand the moral of his address rightly, putting aside the technical part of it, it is possible to have a much greater economy, and at the same time much greater efficiency than we now have in Imperial defence. You must not be too hard on Parliament if it has allowed this question to sleep too long. Lieutenant Bellairs has said that the questions he has put, which, I think, are very well framed and most important, have never been faced in Parliament, because matters have been considered there in water-tight compartments. Now, speaking not apropos of the point of view of any

Government, but apropos of the point of view of the House of Commons as a body, the House of Commons has never yet had the opportunity of discussing both military and naval affairs together. They have been kept by the rules of the House in water-tight compartments. And I think there is a body of public opinion in the House of Commons which would have done much good work in this direction already, if only it had not been bound by the rules which, up till the very latest moment, no Government has seen its way to alter, though the present Government has now taken a step which will, I hope, free the House of Commons with regard to future discussions. I said I thought the lecture was very timely for this reason, that the country is becoming seriously alarmed at the amount of money which is being spent on Imperial defence, that is to say on the Army and Navy combined. We have always had a section of people who have never been thoroughly convinced of the necessity for any military and naval expenditure, and they always protest every year against whatever expenditure is proposed. We have always had some of those people. We have always, on the other hand, had a certain number of people, who, I think, were prepared to vote millions for either purpose, and to say the more the better; but those are not the sections to whom we have to look to influence public opinion. In the House of Commons there is a great body of opinion not confined to one party or the other, a great body of middle opinion which typifies in itself solid, sober, British common-sense. Till quite recent years, that great body of middle opinion has voted the Estimates with very little criticism and very little complaint. It seems to me that the sober common-sense minds in the House of Commons are becoming alarmed, and showing a tendency to criticise military and naval expenditure, which, in my experience, is comparatively new. If we can combine economy and efficiency, then the remedy lies ready to hand. But first of all let us try and find out how it is that our expenditure has grown so seriously as it has done. If it is possible to reduce our expenditure, the first thing to do is to find out what has been at the root of the increase of expenditure beyond what was necessary for the service of the country. I think Lieutenant Bellairs has pointed out why it may be represented that the amount of money we have hitherto spent has been too large, viz., there has been overlapping. We have been thinking of defending the shores of this country both by land and by sea. We must not have overlapping. The first thing I think that we have to lay down is, that the needs of both Services must be considered together and not in water-tight compartments. If we have the Secretary of State for War in one water-tight compartment, and the First Lord of the Admiralty in another, and you never bring them together, and you never bring the naval and military experts together, but ask them to frame their demands separately, you will always be confronted with an enormous expenditure such as we have at the present time. And, remember, what is raising apprehension now is not the enormous expenditure at the present time, but the apprehension of continued increase of expenditure. The first thing we have to do is to consider the needs of both Services together, and never to discuss the Army without thinking of the Navy at the same time. I am speaking, of course, from the point of view of a member of the House of Commons. Are we on the way to get this done? I hope really that we are on the way to get it done. I look with great hope to this new Council of Defence. I speak with some reserve on the point, because though it seems to me good in theory, you can only judge of a thing of this kind by its results, and we have not yet got those results. What its working is at the present time I cannot tell, and we shall not know till the Government

tell us. But it seems to me that in the Council of Defence there is a machine, the results of which, if properly worked, ought to tend to economy and efficiency. You want to bring military and naval experts together around the same table to discuss the needs of Imperial defence together; and if they differ, then the Prime Minister is the proper person to decide between them, and that is why I think it is natural and right that the Prime Minister should be at the head of the Council of Defence. I have seen objections urged to that on the ground that we may, some day, have a weak Prime Minister, and that, if we have a weak Prime Minister, and he meets the military experts and the naval experts face to face, they will run away with him, and ruin his character for economy, and carry him into dangerous excesses. You cannot provide against weak Prime Ministers. I can imagine a scheme of naval strategy being proposed which might be considered most excellent, and likely to be effective, but I cannot imagine such a scheme being set on one side because somebody urged that though that scheme of naval strategy might be excellent, it would be sure to break down in the hands of an incompetent admiral. In the same way we do not, in considering a naval question or military question do anything but assume that the commander will be competent. So, in the case of the Prime Minister, we must assume that we are going to get strong Prime Ministers. I will put it in another way. The Prime Minister ought not to be a man who is to veil his face, and get behind a curtain whenever he sees a military or naval expert, for fear his virtue should be destroyed. We cannot have a Prime Minister who is to be a purdah Prime Minister in matters of Imperial defence. We must look upon it that it is the first duty of the Prime Minister nowadays to take in hand this question of Imperial defence from the point of view of efficiency and economy, and precisely because the duties of the two Services must be considered together, and because there may be conflicts between them, it is the Prime Minister and he alone who can decide between them, and who must supervise their joint discussions. That, in the first place. In the next place, I would like to supplement something that Lieutenant Bellairs said about policy determining armaments. It is quite true that policy determines armaments, but armaments have also something to do with determining policy. We still have the two-Power standard for the Navy — I think that is the official standard, that our Navy is to be equal to the Navy of any other two Powers. Yes, but the two-Power standard does not mean what it did when it was first introduced. When we first heard of the two-Power standard, we only contemplated two considerable Navies, and therefore, the two-Power standard was almost equivalent to saying not only two-Powers, but any probable combination against us. Now the number of considerable Navies in the world is growing. There is Japan with a large Navy, Russia, who, even after this war, is over, I presume, will not be content for long to be without a considerable Navy; France has an important Navy; Germany is sure to have an important Navy; Italy has a considerable Navy; and also the United States. There are six Powers alone. We cannot keep our Navy up to a six-Power standard; we cannot even keep it up to a four or five-Power standard if there are four or five other great Powers who are going to spend their money in building ships. It has come to this, therefore, that while we must keep up our Navy to make us safe against any probable combination against us, yet, at the same time, with the great increase in the Navies of the world, it is, in my opinion, necessary for us as a nation to depart from our old policy of splendid isolation. Splendid isolation, I think, is no

longer the policy for us, and I am glad to see in one respect, at any rate we have departed from it. I am not much in favour of alliances, but splendid isolation is one extreme and alliances are the other extreme. The first desire of this country is to keep on good terms with the United States, so that in our ship-building the United States' programme may not be taken as a competitive programme which we have to meet. But our second important duty, I think, is, that we must maintain closer and closer relations with some, at any rate, of the great European Powers. I said I am not speaking in the sense of making alliances. To give an illustration of what I mean, I would take the last agreement with France as the sort of thing which I do mean. That I call departing from the policy of splendid isolation, to go so far as, at any rate, to meet another European Power, and to come to some adjustment of our interests, which shall produce friendly feeling between the two countries. We cannot, I agree, check our shipbuilding, simply because we happen to be on good terms for the time being with any particular foreign country; but at the same time, when we are looking to the future, we can quite compatibly with that see it to be the business of the Government of the day to so arrange their foreign policy that they endeavour, at any rate, to keep on friendly terms with a certain group of the Powers of the world, so as to make any probable combination which we are likely to have to meet as small as possible. I would say so much purely from the layman's point of view, I am not fitted to enter into the technical part, though I can imagine a great deal of the technical part on which I should like to hear a discussion, as for instance, what the influence of the submarine is likely to be upon naval strategy, and upon the defence of this country. But that I must leave to people who know more than I do. I will, therefore, only say how interested I have been in Lieutenant Bellairs' lecture, and ask those more competent than myself on the question of naval and military strategy to take part in the discussion.

Captain Sir J. C. R. Colomb, K.C.M.G., M.P. (late R.M.A.):—I should have liked, Sir, to listen to some of the officers present on the points to which you have alluded; but as you have called upon me, I will take the opportunity of saying a few words. In the first place, I think we must all be impressed by the importance of the occasion, the importance of the subject, and the admirable way in which it has been treated. I am sure the Institution will feel that we are greatly indebted to you, Sir, not only for presiding, but for making the broad statesmanlike speech you have made on this occasion. It was just worthy of you, because we all know that you look at Imperial questions from an impartial point of view; and although no man can state a case more strongly than you, you always state it with studied moderation. With regard to the lecture, I am absolutely with Lieutenant Bellairs in all his main contentions. I consider there are few men who have done more for the country in opening its eyes to look at the perspective of defence in its broad aspects than the lecturer, and his lecture to-day is simply one more in that series of addresses and publications which have done so much to clear the mind of the uninformed public. That is a most important matter, for the reason that educated public opinion, understanding the perspective of Imperial defence, is the first step to economy and efficiency. There are one or two points that I should like to emphasise my agreement with. First of all, with regard to the two-Power standard, we know that as a rule of thumb standard it is, as the lecturer says, invaluable in the way he has described, namely, that it can be discussed in public. Although I have never

adopted it, I accept it as a Parliamentary necessity, because tacked on to it is this: the two-Power standard *with a margin*, and it is the margin that I attach the most importance to. That margin can only be fixed by the most careful consideration of vast varieties of complex questions which the public cannot understand. These must remain with the experts, and the action be determined by statesmen. The main question is a statesman's question rather than an expert's question. With regard to the battle-ships, I absolutely and entirely agree with the lecturer. The battle-ship is the determining factor. With regard to his allusions to the relative strength of fleets in the last war, I would like to say this with reference to the question of invasion: The chase of Villeneuve by Nelson is constantly brought forward by what our friends call "the land-lubber school" to show what a risk we ran, and how necessary it is in these days to have an enormous home Army for home defence. I would rather go by what our fathers did to guide us than by the theory of to-day in regard to the events that occurred long ago; and all I know is this: that immediately after Trafalgar, within a few weeks of the burial of Nelson, the statesmen of that day did not take the view that the proceedings were a warning to us to have a large Army for home defence, because what they did was on the first meeting of Parliament to propose a vote of two million pounds extra for supplementing the naval forces of this country. Can any proof be stronger of the real views of statesmen who had gone through the emergencies and the exigencies of that perilous time? They saw, without distortion, the facts as they were, and they saw that although the very strongest fleets had been almost annihilated, there was a necessity to supplement our naval power as the true security of these islands. There is one point I would like to mention which may be useful. I think it might be advisable for my gallant friend to attach the document I am going to mention to his appendix, because I think it is of first importance. I find, he says in one part of his paper, that he would like to see the Army Estimates indicate clearly, firstly the expenditure on troops available for expeditions; secondly, for passive defence at home; and, thirdly, for passive defence abroad. I believe he means by that, that he would like to see it in the Army Estimates every year. I mention this because he may not be aware, and the meeting may not be aware, that I obtained a return last year giving those very facts. The reference number is 238 of last session, and it shows that while the total expenditure for the year 1903-4 on the Army was £28,995,000, of that amount £13,485,000 was spent on passive defence. I think that meets his case. Of that thirteen millions, more than half a million was spent on soldiers appropriated to aquatic and submarine defence. You will find also in that return that the number and total strength of our men on the Estimates was 735,789 men, and there were only 144,093 men available for the general service, over-sea of the Empire. I submit to my gallant friend that it would be very useful to attach those figures to the appendix. The other point I would like to emphasise is this: I heartily join in his protest against the doctrine that you must man every ship you build. That is important, because we see in the Colonies—and I am afraid it is rather too much supported by the present Admiralty—the idea that if they raise Naval Reserves they are giving what is wanted as their contribution to naval strength. I ask the meeting to consider this: What is the use of the Russian Naval Reserve as it is at this moment to Russia? What has happened at Port Arthur? Why, the loss and damage to ships have given a surplusage in the active force of naval officers and seamen whom they cannot do anything on the water with because they have not the ships. I

am glad the lecturer has made that protest, because, depend upon it, in the question of Naval Reserve it cannot now be too often made. Our difficulty would be ships, not men. I would like to say one word about the Blue-Water School, against which flouts and jeers have been directed. What is the Blue-Water School? The Blue-Water School takes this view: that we are an island surrounded by blue water, that we are an Empire dependent upon blue water, and that not a thing can leave these shores for any part of the Empire but by the blue water. It means this: that the command of the blue water is the first essential of the survival of our island and our existence as an Empire. The other mistake made is that they attribute to the Blue-Water School the idea that sea power merely means ships and bluejackets. It does not mean anything of the sort. Mr. Thursfield has pointed out that sea power does not merely mean naval force, but that it means the power given by the exercise of supreme naval force to an Army to make attack effective when and where necessary. What we want the people in England to understand is that this is, at bottom, a commonsense question, and not a question to be tied up with the little strings and tapes of a department in Pall Mall which too long have strangled the policy of the Empire. There is one more quotation I should very much like to suggest to my friend that he should add to his appendix of expert opinions. Here is the modern idea of the old War Office, given by a gentleman representing the War Office at the Norfolk Commission. I quote from page 115 of a memorandum supplied to the Commission by the representative of the Auxiliary Forces, Sir Alfred Turner, headed, "Why we need a very large Volunteer force." Here it is:—"A man who is keen and has intelligence can soon be taught what is necessary in military training, except shooting. Give us"—here is what he cooly asks the Royal Commission—"Give us five hundred thousand men who can really shoot well, put them into camp for a month, give them a good stiffening of Regular troops, and there need be little fear of an invasion of the country being successful, so long as we hold command of the sea." He then suddenly lapses into commonsense, for he qualifies this demand with these words—and I claim him as a prophet of the Blue-Water School—"If the command of the sea is lost, five million men in arms will not, I fear, save us." I commend that to you.

Admiral Sir NATHANIEL BOWDEN-SMITH, K.C.B.:—I am very glad that such a well-known writer on the question of Imperial defence as Lieutenant Carlyon Bellairs can assure us that, if only theoretically, at least all parties are now absolutely alive to the necessity of maintaining our naval predominance. But after our recent experience in the South African War, I cannot understand any reasonable Englishman not coming to the conclusion that we must also maintain an efficient Army, I admit principally, for over-sea warfare. It is quite certain we could not have brought the South African War to a successful conclusion without considerable land forces of some description. With regard to the Penjdeh incident of 1885, which the lecturer states was brought about by the ill-starred reductions in the Navy at that period, I would point out that if that incident had produced a war with Russia, we should have had to send large reinforcements to India, and is just one of those cases which point to the necessity of maintaining an efficient Army Reserve. We should have had the command of the sea at that time as regards Russia, and plenty of transports; but they would have been of no avail if we had not the men to put on board them, or if we could only have sent out immature youths, the greater part of whom would have died or have been invalided before they had been six

months in the country. As regards the invasion question, he says that if the sailor can guarantee the country against invasion, what has the soldier got to do with it? And, further quoting from a speech of Mr. Arnold-Forster, of 14th May, 1903, that the Admiralty were prepared to guarantee the country against attack. This is a singular statement, if we compare it with what occurred a few weeks since in regard to the Norfolk Commission. When the late Royal Commission on the Auxiliary Forces met, one of the first acts was to seek information from the Admiralty and War Office; and as far as I understood the Report, they asked the Admiralty if they were prepared with the fleet alone to guarantee the country against raid or invasion, but they got no satisfactory reply. The consequence was a great deal of the proceedings was taken up with the question of invasion, which is a matter of regret, but for which they can hardly be blamed. I therefore protest against the unfair criticism that has been passed on the Norfolk Commission in some quarters. I do not suppose they had any preconceived notions when they were brought together. They examined many witnesses, especially on the matter of recruiting for the Army, which is such a difficult question, and they came to certain conclusions; and whether we agree with them or not, I admire their courage for speaking out their minds. The lecturer has said that the circumstances cannot be suggested under which it would be desirable to leave the Channel or our shores without a considerable fleet. I am rather surprised to hear that statement, because I thought the Blue-Water School's idea was that the place for our fleet was off the enemy's coasts. To be dependent on the Navy alone would necessitate our maintaining a very large fleet in home waters; for in any future combination, we must remember the possibility of a powerful naval neighbour, at first neutral, suddenly turning against us. We shall probably have in future to keep a large fleet in the Far East; but I agree with the lecturer that withdrawing several of our cruisers from some foreign stations would not weaken but rather strengthen our position. The lecturer says he has no objection to mounting a few guns after war is commenced for the protection of the mercantile ports. I am no advocate for fixed defences at mercantile ports, but I would rather have those guns mounted before the war commenced, mounted, if you like, on transporting carriages, and have men trained to work them. It is too late nowadays to leave anything until after a war has commenced. If the Navy is prepared under all conditions and under every circumstance to guarantee this country against raid on invasion, then to be strictly logical we ought at once to disband the whole of the Volunteer forces, except Volunteers for the Navy, and also disband the whole of the Auxiliary forces except what may be required to feed the Army. But I very much doubt whether any statesman would take the responsibility of disbanding our Auxiliary forces without some sort of national compulsory force to take its place. The fact is, we must have an Army—I admit for foreign service principally—and that Army must, under present conditions, be manned by voluntary recruits. The great difficulty is to get those recruits, and that is what doubtless occupied the attention of the late Royal Commission, and what I believe is occupying the attention of the Government at the present moment. Granted that the Army is for foreign service; but if the men composing it are to expect no home service, will you get recruits? There was a proposal made—I think by the *Times*—that we should in future keep a large number of our troops in South Africa. It was stated that South Africa would be a good country in which to develop our young recruits, that the climate was splendid; but would it make the Army popular? If you want recruits you must make the Army

popular; and I do not think the Army would be popular if the men had not a reasonable expectation of spending a part of their service in their own country. Only a few days ago, in the House of Lords, the Duke of Bedford made an excellent remark in regard to that question. He said: "To get recruits you must make the Army popular, and to make the Army popular you must make it popular with the friends and relations of the soldier." For so-called Home Defence, for which I would substitute "Imperial Defence," I would like to act on Lord Salisbury's suggestion, which has been quoted here by the lecturer, namely, that the defence of the nation is not a question for the War Office or the Admiralty, but is a matter for the citizens of the country to take up. The lecturer has alluded to an association called the National Service League, which aims at universal training, so far as it can be carried out, and thus preparing the manhood of the country for future emergencies. In the late South African War, Volunteers, Militia, and Yeomanry volunteered one after the other, and went out there by thousands; but our Reserves were exhausted before the end of the second year, and then we sent out men enlisted hastily in our streets at 5s. a day who had never handled a rifle. I think we should take such action that in future, in a case of emergency, when our men volunteer for foreign service, as they would do again, they should know something about their business. It may be said, perhaps: "If that is the case, why not put the Militia Act in force?" The Militia, as at present constituted, provides no Reserve for the Navy. I should like to see something started that would produce a Reserve for the Navy as well as for the Army. I have long ceased to look upon the merchant service as providing a Reserve for the Navy; but I would exempt the Mercantile Marine from any compulsory training, in consequence of the important work on which they are engaged. I agree with the lecturer, that we should not be expected to man every ship we build. We must have spare ships, because during war we should have to replace those that are sunk or damaged. We want, however, a larger Naval Reserve, and reserve stokers might be obtained from miners and gas stokers, who would probably require an annual retaining fee, and whose health would be much benefited by an occasional cruise at sea. I would say, in conclusion: do not let us allow that anything is impossible; and I also take this opportunity, on behalf of the Council, to thank Lieutenant Carlyon Bellairs for his interesting and able paper.

Colonel Eustace J. A. Balfour, A.D.C. (late Commanding 7th Middlesex V.R., London Scottish):—I speak as an ex-Volunteer Colonel, and I can venture to say that I am neither a shop-keeper nor a solicitor. My controversy with the lecturer dates back, I think, to the year 1891, when we had several articles, one against another, in the *United Service Magazine*, on the very topic upon which he has lectured to-day, the point really being—and it is the only point I shall allude to—the relationship between island defence by the Navy and by the Auxiliary forces. I think that I can reconcile, as some of the speakers have partially reconciled this afternoon, the existence of a land defence force, of whatever strength may be required, with the supremacy of the Navy. So far, I belong to the Blue-Water School, but in a modified way, and I think the point really depends upon this: supposing we were at war with a combination of foreign Powers, who might conceivably establish local supremacy, we should then be liable to raids on our coast; but during the period during which those raids might be carried out it would be possible for us, either by a new alliance or by a concentration of ships from distant parts of the

world, to re-establish our local supremacy. There is, then, what I have ventured to call in some of my writings and lectures on the subject, an intermediate stage to be tided over; and to tide over that intermediate stage, and to keep the country quiet, without panic, I do think we want a considerable island land defence. I will not go into the question of the Volunteers and Militia at present, but I believe that, if properly treated, and properly trained, they can do that work. They certainly would require to be numerically considerably greater than the number of troops that might be landed, because they naturally would be inferior in training; and also one has to consider the enormous advantage that temporary command of the sea gives to the enemy in landing a raiding party, let us say of two army corps, at a point chosen by them; so that we, with our troops scattered all over the country, would require to meet them in superior force at any point; but considering that the cost of the Volunteer is only £6 a year, and that for that £6 he can be fairly well trained and organised, if the thing was properly carried out, I think that would meet the situation. But my point is, that the effect of his existence at that comparatively cheap rate really sets free the Navy to do its legitimate work in the offensive in distant seas.

Mr. G. F. Shee (Secretary of the National Service League):—The lecturer made some remarks on what he regarded as the extraordinary inconsistency of the National Service League, in proclaiming the duty of compulsory service for home defence, and pointed to the incompatibility of that statement with the acceptance of sea supremacy as the first condition of our existence. I hope, therefore, I may be allowed to say a few words to clear up the fallacy that underlies this view. I labour under the great disadvantage of having come into the room without having seen the lecture previously, and it is such a very able paper that I should like to have had the opportunity of looking into it more closely, but I will try and deal carefully with the points raised, premising that I speak personally, and not as Secretary of the National Service League, as I have not had the opportunity of consulting my Committee, nor have I come here at their request. But I venture to say at once, that the National Service League, as far as I understand it, is in complete agreement both with the lecturer and with Sir John Colomb in the view that the essential purpose in war must be offence, and that the force which we need essentially is to be a striking force, eventually for foreign service; but it must be perfectly clear—and I am sure it is perfectly clear to Lieutenant Bellairs—that there is no obligation on the citizens of any country to serve abroad in time of peace, or even, except under certain circumstances, to serve abroad in time of war. The moral obligation of home defence is one that has been admitted by all writers and all thinkers from the earliest times to the present day. That is a thing you can enforce, and it is one to which a nation really patriotic and led by patriots will respond; but it is a totally different thing if you are going to say to the people: "If you want to be of any use to your country, you must serve abroad; we compel you now to serve abroad; or we compel you to train yourselves for service abroad." It is perfectly obvious that that is not an obligation which will be accepted by this nation, certainly at present. But it is also perfectly clear that if you put into force the obligation, which is admitted on all hands, that every man who is physically fit should serve his country for home defence—that being the obligation, if you have trained your nation to arms, you will get a broad basis of recruiting for your forces. You will get, first of all, a great

striking force on voluntary lines in time of national emergency. I would like to turn aside for one moment to criticise a point in the lecture and in the diagrams, in which the lecturer has dubbed the whole of the Auxiliary forces of this country, the whole of the non-Regular Army, as "immobile" forces. At the same time he admitted that 140,000 of those same "immobile" forces had gone to fight in South Africa! Now that is just an instance of the kind of contradiction that his argument really leads to. Here we have a force, admittedly only for home defence, a force, by the nature of the conditions on which it is raised, extremely inefficient and extravagantly expensive, and yet that force does give us in time of war a very considerable number of men who did good service, partly excellent service, but some of whom, as Admiral Bowden-Smith pointed out, were without any training whatever, and who came forward with no other stock-in-trade than good-will. What the National Service League believes is this, that if you give the A.B.C. of military or naval training to every young Englishman, you will have a great reserve of trained men who will come forward in time of national emergency with something better than that stock-in-trade of good-will, with the knowledge of how to fight, with the feeling of patriotism which they have imbibed in the course of the service to their country, and giving something in the shape of a real trained striking force. But let us put even that aside for the moment. I would like to ask Lieutenant Carlyon Bellairs how he proposes to produce the force which both he and Sir John Colomb, and I believe all writers of the Blue-Water School, consider to be necessary in order to carry on war efficiently? How are we going to get the forces necessary for our Imperial offence and defence? No one, who has studied the history of our Army during the last hundred, fifty, twenty-five, or ten years, can fail to be convinced that the voluntary system, as the only basis of the recruitment of our forces, is absolutely out-of-date and obsolete, and has completely broken down. It is enormously costly, and it gives us material that is not efficient for the purpose for which we need it. We fill our ranks with hundreds and thousands of weedy boys, who, when they go to war, fill the hospitals; indeed, they do so even in time of peace. The story has been the same in every war we have undertaken during the last century. In the Indian Mutiny, the general complaint was, that the young boys sent out there to fight filled the hospitals. They fell sick of fever, and never did a day's work from the beginning of the war to the end. Lord Raglan made exactly the same complaint in the Crimea; Lord Kitchener made precisely the same complaint in South Africa. We are asking boys and inefficient men to fight the battles of the Empire, and it cannot be done. We can only get Imperial forces by getting an Imperial and national basis of training, and that is the essence of the contention of the National Service League. We want to provide a national basis for a national force. I should like to turn aside for one minute to refer to a remark which Sir John Colomb made, that if we go by what our fathers did a hundred years ago, we should be pretty safe. I think Sir John Colomb knows the facts well enough to bear me out when I say that in those days, when, in the words of the greatest naval expert alive, we had a naval force more than equal to the combined forces of all Europe —in spite of that enormous naval preponderance we had in this island 800,000 men in arms. Those were the ideas of our forefathers in those days. They may be right or wrong; but, at any rate, when Sir John Colomb appeals to what our fathers did it should be remembered that the people of England in those days, Pitt and the great statesmen of that time, considered that, in spite of our enormous naval supremacy, we

did require a thoroughly trained home defence force. I have put aside the question of home defence for the moment entirely. I put the plea to the Blue-Water School themselves, that if they want to provide what is necessary for this Empire if it is to exist, if they want Imperial forces, they must have an Imperial basis, and with no other basis will it be possible to provide our armies and even our navies effectually. I will not speak of those greater considerations—or, at least, of equal importance—of the preservation of the national physique from that deterioration of which we see so many signs; I will not say anything of the needs for industrial organisation, the organisation of our working classes and of our leaders of industry by those habits of discipline, orderliness, self-control, and everything that comes from a sound naval or military training. Other nations have adopted these principles only in recent years, and they are already living to see the fruits of them in increased national efficiency. Look at Japan, the nation that is always held up to us as a marvel at the present day. To what does it essentially owe its extraordinary efficiency? To the fact that in 1868 it adopted a system of universal service, for home defence, be it noted, because even Japan did not say that its citizens must serve abroad in time of peace; but having that efficiency, having that national basis, they have produced an Army and a Navy which are the admiration of the world. In conclusion, I would like to say that I do not believe—and history bears me out—that any nation can long continue to be great and safe if it neglects the fundamental duties of national defence. Have as great a Navy as you like, have as many guns as you like, but unless you base your forces upon the national foundation of the people's patriotism, I do not believe that your battle-ships, however numerous, or your guns, however good, will save the nation from disaster in the day of battle. That has been the teaching of history all through. It is, perhaps, rather a far cry to go back to such ancient time, but, after all, we may consider that Carthage had many points of resemblance with us. True, she was not an island, but our being an island implies a great Navy, and naval supremacy is the basis of our existence. Carthage had that naval supremacy, and she lost it by degrees. Why? Because she was face to face with a nation which, though poor and though without a Navy to start with, made up its mind, by national efficiency and national self-sacrifice, to bring to her knees this great maritime nation, the empress of the world in those days, and the one that commanded the wealth of the world, but who refused to ask of her citizens that personal sacrifice which made the Romans great. I believe, without pressing the analogy too far, there is something in that of warning to us. I would most earnestly ask the lecturer, for I reckon him as a patriot and a man aiming at national efficiency, not to oppose a principle and a practice which will give not only that particular naval supremacy which is the most important item in the national existence, but also those greater qualities of national efficiency, national self-sacrifice, and national patriotism, which must be ours if we wish to preserve the great dominions which have been handed down to us.

Lieutenant CARLYON BELLAIRS, in reply, said:—I must second very fully what Sir John Colomb said about the pleasure we all feel in Sir Edward Grey's presence amongst us to-day. As a naval officer, I have seldom heard a speech to which I have listened with more emphatic approval. I hope sincerely that his views will go forth to the world in general, and lead to much good being done. As he said, we must not have over-lapping in our system of defence. There we are all emphatically

agreed. Then he praised the Council of Defence, and there I think we are all again agreed. I agree that the Prime Minister should be the head of that Council, and that you cannot provide against having a fool for a Prime Minister any more than you can provide against having a fool for an admiral. If you have a fool for a Prime Minister, you will get fools all along the line; admirals as well, for every country has the Cabinet Ministers, admirals, and generals that it deserves. Then I also agree with what the Chairman said about probable combinations of Powers in war. With regard to his suggestion, that information should be obtained as to the influence of submarine boats, it would be rather premature to discuss that question except so far as it affects the question of our margin of safety in battle-ships. It is a new factor that has come into warfare, and I take it that the provision of three extra battle-ships balances that factor of submarine boats. I see with great pleasure Sir John Colomb amongst here to-day, because his recollection of these discussions can go back over many years, during which he has borne the brunt of the work; and he was kind enough to come here and say that he was in agreement with me. I would put the boot entirely on the other foot, because I have been sitting at his feet and learning and imbibing wisdom from him, so far as I can learn and imbibe wisdom. I am very glad he mentioned that return, because I must confess I never knew of its existence. The War Office confesses that out of the expenditure of nearly 29 millions, 13½ millions is spent on passive defence. I think that bears out my remarks.[1] I am sorry for one reason that we have only one naval officer to join in the discussion. I did make an endeavour to get the muzzle removed from naval officers—that muzzle that Sir George Clarke spoke of just now—but I was not successful. The Admiralty did not think it was one of those subjects on which they could remove the muzzle, or rather, I should say, encourage naval officers to speak. Had naval officers spoken to-day I am sure they would have supported my contention and the Admiralty view, that the country is only open to invasion by five thousand to ten thousand men. It appears in the Minutes of evidence given by Lieut.-General Sir William Nicholson, the then head of the Intelligence Department, before the Duke of Norfolk's Commission on the Militia and Volunteers. You will find that on page 1005 I gave an extract from General Sir William Nicholson's evidence. Not only did the Admiralty furnish the Commission with that view, but the Admiralty also furnished it to the War Office. If you turn to page 1005 you will see the quotation: It says: "It is held by some that the Navy can guarantee the complete protection of the United Kingdom against the danger of invasion by any larger force than from five thousand to ten thousand men. What does the word 'some' mean? Does it mean the Admiralty?

A. :—Yes.

Q. :—We may take it that that is the view of the Admiralty?

A. :—That is the view of the Admiralty.

Q. :—Is it also the view of the War Office?

A. :—No, it is not the view of the War Office."

I do not think I am revealing any secrets when I say that I believe Sir John Fisher, who will be the expert adviser representing the Govern-

[1] The correct figures should be £14,455,000, as £900,000 extra is for troops in Great Britain appropriated to the naval bases abroad. Of the Regular Army at home, only those in depôts are credited to passive defence.

ment at the Admiralty, holds that the Admiralty view is a little exaggerated. I think the estimate of 10,000 men is rather an exaggerated estimate of the invasion this country is liable to. I can quite see that Sir Nathaniel Bowden-Smith will not agree altogether with what I suppose will be called the extremists of the Blue-Water School. Really we of the extreme naval school are the true economists in naval defence. We desire to prevent over-lapping in expenditure. We hope to prevent that sort of panic-stricken state amongst the people of this country in which they want to prepare for everything. Anybody who has been in the various ports of the Empire will know that there is a coterie of naval and military officers and civilians at any single one of the ports who go prowling about looking for eligible sites for guns to defend the place against fleets which are going to drop from the skies, or something of that sort. If you look at the history of this Japanese war, I really cannot see that the home defence shore force matters one little bit. When the Vladivostok fleet did get down into the narrow straits, where there were seven or eight heavily fortified positions, it did not attack them. They were of no use whatever to Japan. It was ships the Japanese wanted. Then the statement was made by Sir Nathaniel Bowden-Smith that the Blue-Water School had always held that we should have our fleet off the enemy's coast. That is the view, but it never prevented us from having a reserve fleet in home waters in the Channel. We have always had a fleet in home waters to defend communications. You have a very valuable commerce, worth millions and millions, coming over the Channel; you have your colliers and transports and other boats moving out to the support of the fleets in distant waters, so that you cannot manage without a home defence fleet. When you come to put the thing on an economical basis, as you are bound to do, you get the results that I have given in the diagram and figures, which I do not think have yet been challenged, although I have given them in the Press. I am most anxious to get them challenged. I am using official figures when I say that, providing for the interest on the first cost of the battle-ship, and also for depreciation for a life of twenty-five years, so that you replace every battle-ship, and including repairs and everything else, a fleet of eight battle-ships costs £1,304,000, and when you provide an Army on the lines recommended by the Norfolk Commission, the very least you can work it out at is 10½ millions. You remember the Norfolk Commission said you cannot defend against a European Army unless you have a conscript Army, in which the men are trained all the year round, and that requires at least £75 per man. In addition, they laid down that the officers must be officers of the Regular Army, so that you cannot reckon officers at less than £400 a year; calculated on this basis, the cost would be considerably more than my minimum estimate of 10½ millions sterling. I have been very much struck in this discussion with the way the representatives of the National Service League —we have two, Mr. Shee and Sir Nathaniel Bowden-Smith—have, if I may say so, shifted the ground on which they justify the National Service League's contentions. I also had a letter from Mr. Yerburgh, who belongs to the Council of the League, in which he says that they "in place of the present inefficient and extragavant arrangements for home defence, seek to substitute a raid defence force, efficient and economical, which can be relied upon in time of emergency to volunteer for service abroad." Clearly, in the evidence given before the Royal Commission, the idea of conscription was justified on the grounds that their main object was to provide against the invasion of a great European Army of 150,000 picked troops, not a

raid.[1] We have got to get clear thinking on this matter. We have got to get to grips about this question. I only hope the National Service League will define their position right throughout the Press much clearer than they have done. I think there are points on which I too would agree with the National Service League. I would agree with the National Service League that in the schools of this country there should be physical training, and I believe that is one of the planks in their platform. But it is not the main plank; I hope it will become the main plank. Nothing gave me greater pleasure than to see Colonel Eustace Balfour here. We have often revived our controversy quietly, and have always revived it with greater approximation to agreement than, I am afraid, characterised the controversy in the old days. I would only say this, that I do not think we are justified, in view of the policy of the country being such as it is, viz., to maintain the command of the sea, I do not think we are justified in contemplating for one moment the loss of that command of the sea. I at once say: "If you can prove to me that we are liable to lose the command of the sea, then I can give you the figure of the cost of the battle-ships that you must build to make sure that such an event never happens." The collapse of business would be too terrific if we reached that point. No land forces can save us from the effect. We cannot manage without a fleet in home waters. I do not like that expression: "The Fleet"; it always leads to the assumption on the part of the public that we have only one fleet. We have 48 modern battle-ships now; that means four fleets of twelve battle-ships. And supposing our position became precarious at home, and we repeated what we did in 1796—I do not think that position ought to be contemplated—we ought to have enough battle-ships to safeguard this country against any probable combination. I have not had time to answer Mr. Shee fully; but we fall out on the argument that men volunteered for service in South Africa, and how we would have managed but for the volunteers. We agree that there should be a mobile Army that we can send out. I should like to ask the question: would we have required 400,000 men for South Africa if we had been able to send out 250,000 very efficient men? I do not think we should. I think if it had been an Army as efficient in every respect as, say, the Japanese, you would have been able to carry through that war in half the time and with half the force. I do not think you will get the Army you require for service abroad by placing a home defence Army in competition with the volunteer Army for service abroad. We want to concentrate as much as we can on the volunteer Army for service abroad. I was asked how I would get at the numbers required. I am not a soldier, and I do not know the numbers required; but I should appeal to India in the first instance. I should ask India: "What do you require?" because their land frontier is one of our most immediate necessities. Having obtained those figures, I should, on the basis of the Cabinet's policy for offensive action, ascertain what extra men we require beyond the requirements of India. I do not think we could contemplate, for instance, another war in South Africa at the same time as we provide for India, because these things have to be considered on an economical basis. The Cabinet are bound, in the first instance, to go to the Navy and say: "What do you require to carry out this policy?" Then the Cabinet ascertain how much they can spare

[1] The correct term should have been "Compulsory Service for Home Defence." The scheme submitted by the League provided for 450,000, exclusive of Naval Militia.

of the funds of the country for other purposes; and, having ascertained that, they are practically bound to turn round to the Army and say: "We can only spare this amount of money; you must do the best you can with it." That is all I have to say. I am sorry I cannot respond to Mr. Shee's very courteous appeal; but while their main plank is to organise an Army for home defence, on the plea that the Navy may be decoyed away, I must do my level best to oppose them, and I hope with the support of all members of the Blue-Water School.

Mr. SHEE:—That is not the National Service League's plank at all.

The Right Hon. Lord BRASSEY, K.C.B.:—I have the honour of performing a very agreeable duty; it is that of proposing a vote of thanks to Sir Edward Grey for having occupied the Chair that afternoon. Sir Edward Grey has conferred a service upon the Institution, and has greatly helped Lieutenant Bellairs in the work in which he is engaged. The able speech delivered by Sir Edward Grey is an important contribution to the discussion of Imperial Defence, a subject now much before the country. Sir Edward Grey asked me to take some part in the discussion. I would like to say this, that I am fully sensible of the duty which rests upon all who have been in any way connected with the naval administration of the country, and I hope I have not neglected that duty. I did not have the privilege of seeing the paper before I came here this afternoon, and I was very unwilling to occupy your time with desultory and imperfectly considered observations. One thing only I would desire to say; economy in naval or military administration depends upon policy, and we look to Sir Edward Grey as one of those upon whom we may rely to exercise an influence on the policy of the country which will unite peace with honour. I have much pleasure in proposing a vote of thanks to Sir Edward Grey for presiding to-day.

MACHINE GUNS UP-TO-DATE.

By Lieut.-Colonel E. ROGERS.

Friday, 29th April, 1904.

Colonel G. W. A. FITZGEORGE in the Chair.

The lecture was read by the Chairman, as Colonel Rogers was suffering from a slight bronchial attack.

THE last occasion on which I had the honour of addressing the members of this Institution on the subject of machine guns was in 1875[1]. But previous to, and later than that date, I took part in the various discussions in the theatre of the old building from time to time, since the introduction of machine guns, and notably in the discussion that followed the admirable lecture delivered by the late Colonel Fletcher, Scots Fusilier Guards, in 1872. Colonel Fletcher was the infantry member of the committee formed at that time, under the Presidency of Colonel Wray, Royal Artillery, to test machine guns extant, and the result of their labours was the adoption of the Gatling into the Navy, and partially into the Army of the day. Machine guns were in those days looked at askance. The Gatling throughout the Army was no man's child. Artillerymen resented its birth; cavalry shied at it; infantry considered it an infringement, if not a slur, upon their rifle fire; but Royal Engineers, through their spokesman (Colonel Lonsdale Hale) were brave enough to offer to foster-father it, and afford it infantile protection. But, as was pointed out at the time, Royal Engineers have something else to do than pounding away, and riddling the enemy with pellets from machine guns! Be this as it may, other systems, besides that of the Gatling, soon came into vogue; and finally the Maxim, and later on the Colt guns, have been generally adopted into both Services, and machine guns generally are considered indispensable by all nations. In the Boer War of 1900-1902, Maxims and Colts were largely employed—chiefly as units as opposed to batteries; they were, in fact, attached independently to small bodies, regimental or detachmental. It is to the startling story of individual instances of effective machine gun fire-action in South Africa that I now chiefly desire to direct your attention. But before entering on the wide field of operations between the years 1899-1903, I wish, if you will

[1] "The Gatling Gun : Its place in tactics."

permit me, to glance over the early history of machine guns, and their useful service in previous engagements elsewhere.

Until the invention of solid-drawn cartridges, it was utterly impossible to count upon safe mechanical action in the rapid-firing locks of modern machine guns. At first, say, in the seventies, with ordinary Boxer cartridges, all jammed! The Gatling, the Gardner, and the Nordenfelt of those days, all jammed. Nevertheless, at the battle of Ulundi 3,000 rounds only were fired from the two obsolete Gatlings[1] employed, and the slaughter effected was immense. My old friend Captain (now General) John Owen, R.A., was the Gatlinger, and he told me so at the time. Since then, all defects of rifle ammunition and lock-action have been remedied, and the upshot is that a uniform, continuous rifle-fire from 200 to 1,200 rounds a minute can be maintained by machine guns with murderous scientific results! "For how long?" it will be asked by Didimus. Well, as to that, it will be admitted that there are more facilities for cleansing a machine gun than redding a rifle.

But, as a matter of fact, there is an inventor who has put on the market a gun that keeps cool when rifle barrels would be red-hot. I have been present when, after 500 rounds were fired continuously, the barrels of this gun were found to be *perfectly cool!* The secret (for it remains one) simply implies "destruction of heat," which scientists have vainly endeavoured to discover for ages! The Maxim, at all events, possesses a self-acting cooling apparatus in its water-jacket, and this, I am told by experts, is not even indispensable for discharging over 1,000 rounds at a time. It is my opinion that the firing of more than 3,000 rounds in any action is highly problematical —1,000 or 1,500 rounds per gun is ample for any anticipated fire-action. But that the power of firing 1,200 rounds a minute should reside in a machine gun for crucial moments ought to be highly satisfactory, and, in fact, annihilatory.

At all events, you will hear, later on, what happened on special occasions during the South African War and the Spanish-American business, as well as during our own "Little Wars" in India, Africa, and South America. Perhaps, too, I may be able to refer to the action of machine guns in the latest and most terrible of conflicts—that between Japan and Russia.

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[1] In 1875 I was stationed as S.O.P. in Chester, where I drilled the local Artillery Volunteers to the use of the Gatling. As part of this instruction I arranged a field-day, as on actual service. At daylight bugles summoned the men to the Volunteer shed to mount the Gatling on its carriage, fill the limber with feed-cases, and harness the pair of horses. Then seated on the limber we drove out 12 miles to Bagilt, on the coast, where a linen target had been erected. On arrival I gave the word "Action front: stand by with feedcases." Then I turned the handle briskly; rattle went a few rounds, and then jammed! I withdrew that lock and turned the handle confidently again; but no—jam after jam occurred, so I had reluctantly to abandon the attempt and "limber up," returning to Chester dejectedly. I wrote at once to the firm in London who had supplied me with the cartridges (£5 per 1,000), and complained bitterly. The answer came back promptly by wire, thus:—"Sorry for mistake made by sorting clerk. Throw remaining cartridges into the Dee; they were intended for the Chinese Government!"

It used to be an axiom, *ex uno disce omnes*, but we up-to-date people require proof of everything, not demable assertion. We therefore desire, and even demand, to hear what machine guns have done in war up to the present, before we put entire faith in their prowess or believe entirely the enthusiasts who laud their powers. This is only reasonable and justifiable. I lectured on this subject to Volunteers in Manchester in 1889, and subsequently to the Tactical Society, at Liverpool; and now, once again, I venture to come before *you*, the most critical audience in the military world. But, remember, the very object of my presence here to-day is to challenge criticism, and to provoke discussion; to answer questions, if need be, and, as an enthusiast, to defy defeat.

The question of machine guns is, indeed, still an open one; I do hope, therefore, that on the conclusion of my reading this crude and necessarily incomplete paper, officers who have served in command of these guns during the South African War and campaigns elsewhere, will come forward and tell us their varied experiences as to the use and abuse of these undoubtedly destructive weapons of war.

Personally, I claim to have contributed very materially by pen and tongue to the introduction of machine guns into the armaments of this country. There are other officers in the Navy and the Army who are very nearly as enthusiastic about machine guns as I am. On one occasion, in the Theatre of the old house, Lord Charles Beresford, ever free and outspoken, said: — "As far as I am personally concerned, I have such faith in machine guns that I would to-morrow rather command six batteries of these guns on shore than I would the finest iron-clad in the Navy, with the chance of a brilliant action."

What Lord Wolseley thinks of them is likewise matter of notoriety:—"Any European Army," he remarked, during a discussion in this Institution, "that will have these guns, with thoroughly drilled men, and smokeless powder, is certain to win the victory in the next war." (*Nous verrons!*).

During a sham fight at Gravelotte in 1902, the German Emperor is reported to have said:—"In the next European war, 4,000 men with machine guns will be able to hold an army of 80,000 at bay." Was His Majesty thinking of the battle of Mars-la-Tour, where the five battalions which went into action with 95 officers and 4,548 men against the French mitrailleuses sustained a loss of 72 officers and 2,542 men? or of that awful fight at St. Privat, when *6,000 men fell in ten minutes*?"

And here I may be permitted to mention that an article of mine, published in the October, November, and December numbers of *Colburn's United Service Magazine*, 1881, entitled: "Machine Guns: Their Status in Warfare," was reproduced verbatim as an "Ordnance Note, No. 173," by order of the then U.S. Secretary of War, General S. V. Benet, Chief of Ordnance, without the slightest reference to, or acknowledgment of, the writer. This, I am bound to confess, was highly complimentary. So when forwarding a copy of my Manchester lecture to the President of the United States, I mentioned the fact, and I had a courteous reply. You are no doubt aware that President (then Colonel) Roosevelt commanded a regiment of "Rough Riders" in the Cuban War, and that he wrote a book on the subject. On several occasions a battery of Gatlings was attached to his corps in the battles around Santiago. In his admirable, brief, soldier-like volume (like some of Lord Wolseley's early productions)

Colonel Roosevelt writes as follows:—"Suddenly, above the cracking of carbines, rose a peculiar drumming sound, and some of the men cried: 'The Spanish machine guns!' Listening, I made out that it came from the flat ground to the left, and jumped to my feet, smiting my hand on my thigh, and shouting aloud with exultation: 'It's the Gatlings, men, *our* Gatlings!' Lieutenant Parker was bringing his four Gatlings into action, and shoving them nearer and nearer the front! Now and then the drumming ceased for a moment, then it would resound again, always closer to San Juan Hill, which Parker, like ourselves, was hammering to assist the infantry attack. Our men cheered lustily. We saw much of Parker after that, and there was never a more welcome sound than his Gatlings, as they opened. It was the only sound which I ever heard my men cheer in battle." At page 147 he goes on: "They (the enemy) kept up a very heavy fire for some time longer, and our men lay down, only replying occasionally. Suddenly we heard on our right the peculiar drumming sound which had been so welcome in the morning, when the infantry were assailing the San Juan blockhouse. The Gatlings were up again! I started over to enquire, and found that Lieutenant Parker, not content with using his guns in *support* of the attacking forces, had thrust them forward to the extreme front of the fighting line, where he was handling them with great effect. From this time on, throughout the fighting, Parker's Gatlings were on the right of my Regiment, and his men and mine fraternised in every way. He kept his pieces at the extreme front, using them on every occasion, until the last Spanish shot was fired. Indeed, the dash and efficiency with which the Gatlings were handled by Parker was one of the most striking features of the campaign; *he showed that a first-rate officer could use machine guns, on wheels, in battle and skirmish, in attacking and defending trenches, alongside of the best troops, and to their great advantage.*"

This is what I myself have advocated from the first, and I only wish we had Lieutenant Parker here to-day, to pump him on the subject! But no doubt we have several Parkers in our own Army, and a few of them are, I hope, present to give us the benefit of their experiences. Besides Gatlings, the Colt automatic gun made its *début* at Santiago, and in connection with these machine guns was a dynamite gun, which Colonel Roosevelt rather disparages:—"The shots from the dynamite gun," he says, at Page 164, "made a terrific explosion, but they did not seem to go accurately. Once one of them struck a trench, and wrecked part of it. On another occasion one struck a big building, from which there promptly swarmed both Spanish cavalry and infantry, on whom the Colt automatic guns played with good effect during the minute that elapsed before they could get other cover. These Colt automatic guns were not, on the whole, very successful. The gun detail was under the charge of Sergeant (afterwards Lieutenant) Tiffany, assisted by some of our best men. The guns were mounted on tripods. They were too heavy for men to carry any distance, and we could not always get mules. They would have been more effective if mounted on wheels, as the Gatlings were. Moreover, they proved more delicate than the Gatlings, and very readily got out of order. Parker took the same fatherly interest in these two Colts that he did in the dynamite gun, and finally I put all three, and their men, under his immediate care, so that he had a battery of seven guns. In fact, I think Parker

deserved rather more credit than any other man in the entire campaign. . . . He had the rare good judgment and foresight to see the possibilities of machine guns, and, thanks to the aid of General Shafter, he was able to organise his Gatling battery. He then, by his own exertions, got it to the front, and proved that it could do invaluable work on the field of battle, *as much in attack as in defence*. Parker's Gatlings were our inseparable companions throughout the siege. After our trenches were put in final shape he took off the wheels of a couple and placed them with our own two Colts in the trenches. . . . At no hour of the day or night was Parker anywhere but where we wished him to be in the event of an attack. If I was ordered to send a troop of Rough-Riders to guard some road, or some break in the lines, we usually got Parker to send a Gatling along, and whether the change was made by day or by night, the Gatling *went over any ground*, and in any weather. He never exposed the Gatlings needlessly, or unless there was some object to be gained, but, if serious fighting broke out, he always took a hand. Sometimes this fighting would be the result of an effort on our part to quell the fire from the Spanish trenches; sometimes the Spaniards took the initiative; but at whatever hour of the twenty-four serious fighting began, the drumming of the Gatlings was soon heard through the cracking of our own carbines."

Lieutenant Parker was, indeed, an ideal Gatlinger, and no doubt the President has by this time promoted him to be "Inspector-General of Machine Guns."[1] But it was not only in trenches, and in the first line of infantry fire-action that Gatlings were employed by him; they did good service against field-gun batteries. I see by a note on Page 191 that Parker has published an account of the campaign, too, entitled, "With the Gatlings at Santiago." I have not seen this work, but can well estimate its value, as throwing practical light on my subject. "Parker," says our author, "had a splendid time with the *Gatlings* and the *Colts*. With these machine guns he *completely silenced the battery in front of us*." The italics are mine.[2] So much for the employment of machine guns in what may be called European warfare, and I make no apology for quoting so extensively from the President's work, which, indeed, I strongly recommend for your personal perusal. In the Matabele and Chitral campaigns, as well as in numerous engagements on the West Coast of Africa, the Maxim automatic gun proved itself a most effective man-slayer. Through the courtesy of the Maxim gun management, I am enabled to quote from a pamphlet recording the action of Maxims in these countries, and thus to recall a few incidents to your memories —perhaps already forgotten amid the turmoil of a great war. In doing so, I shall take one or two extracts only from the various newspaper accounts given there on the subject, and merely summarise the descriptions of fights.

Here, for instance, is an account of what occurred near Fort Victoria in 1893, when the Chartered forces, under Major Forbes, overwhelmed Lobengula's main army:—"Meanwhile, marksmen outside the laager had become engaged with the enemy, but they fell back, as the Matabele swept forward. Then the machine guns got

[1] A post that ought to be, I think, speedily created in this country, now that machine guns are so universally adopted.

[2] For it is what I ventured to prophesy in my lecture here in 1875.

to work. The Matabele presented a wide front, and they were struck down by scores as they got well within range. But they did not falter until they had reached the nearest waggons. Then the havoc wrought by every Maxim that could be brought to bear proved too much for their valour. They wavered, and then fell back, but not in disorder. . . . . In the third attack, on our laager, the enemy broke and fled at the first taste of the Maxims, impelled by a wild desire to find cover from the destroying hail." . . . . . "During the fight, the Matabele were once within a distance of fifty yards from the camp, but their further advance was stopped by the machine guns (four Maxims, a Gardner, and a Nordenfelt), whose deadly fire was directed against them, a large number of them being killed in their retreat by the fire from the Maxim guns." . . . . In this action Captain Reid's Maxim, which he was serving himself, fired about 1,200 rounds, and did not once jam."

The next country to which I shall refer is Gambia, a settlement on the West Coast of Africa, and, by a happy coincidence, to the very district where I myself served during the sixties, when we were at war with the self-same tribe. As to the shelling of Goonjur (a native town on the southern coastline), the correspondent of the *Morning Advertiser* writes (on March 8th, 1894) as follows:—"The enemy, however, were well concealed among the long grass, and their whereabouts could only be discovered by the smoke from their guns. Captain Campbell brought his Maxim gun into play whenever the presence of any considerable body of natives was revealed, and in working his weapon he was very ably assisted by Lieutenant Webb, of the 'Phœbe,' the only naval officer with the flying column. . . The conduct of the men of the West India Regiment was again excellent. They fired steadily and with effect. At times the attack of the enemy developed into a concerted fusillade, and the Maxim was then brought into play upon the masses of natives concealed in the bush. A few moments of this would suffice, and the column would move forward slowly again."

During the march on Chitral in 1895, the Maxim again asserted its deadly powers. The Malakand Pass was captured on 3rd April, and, says the Viceroy in his despatch home:—"Advance was made by our infantry in several columns, and the heights were ultimately carried at the point of the bayonet. Artilley and Maxims co-operated with great success." On 17th April the Hillmen, we are told, who attacked the guides, lost over 400 killed and wounded; when coming up close to the river-bank they fell in large numbers before the concentrated rifle and Maxim fire. At Miankalai the troops halted whilst the ground was being reconnoitred, and the Hillmen fell back amongst stone sangars which they had erected upon, and alongside, the road. It is thus described:—"The Guides went working along the flank, and the Seaforth Highlanders, with the sturdy little Ghoorkhas, went for the foe direct, a Maxim playing briskly on the enemy's position. The Tribesmen did not wait for us, but fairly turned tail and ran. Either our force was more than they had counted on, or the guns were more than they could stand."

As regards the storming of the Malakand Pass, it is recorded:—"The enemy's loss was estimated to be nearly 500 killed. The Guides led the way up through defiles, 3,000 feet long, to the top of the Pass. When a quarter of a mile had been traversed, a rapid succession

of rifle-shots proved the nearness of the Swatis. The Maxim guns were soon placed in position, and for some hours did deadly work against the indomitable natives."

The actual Report, by Major-General E. Collen, Commanding Chitral Field Force, must not be omitted. At paragraph 15 of his despatch, he says: — "Sangar after sangar was obstinately held, each sangar, as it was rushed, coming at once under the fire of the one above it; and here I may note the admirable service done by the artillery and Maxim guns. Several attempts were made by the enemy to concentrate from above, and hold lower sangars and positions; but all such attempts were frustrated by the admirable practice of the Mountain Batteries and Maxim guns over the heads of our advancing infantry, although at several points the sangars were only carried by hand-to-hand fighting."

Next, although not exactly in chronological sequence, comes a "little war" in Sierra Leone. On 4th February, 1894, an expeditionary force advanced against a stockade manned by Sofas, a martial tribe under Fodi Silah. Lieutenant Macdonald, 1st W. I. Regiment, in command, had with him 300 men West India Regiment, some field guns, and one Maxim. He soon got his 7-pounders and Maxim into position, and, it is reported: "In twenty minutes he had succeeded in making a sufficiently large breach in the massive stockade to allow the troops to advance and storm the stronghold." But, of course, the Maxims had nothing to do with opening the breach, except killing its defenders. Machine guns are useless in this respect, and possess no incendiary powers.

Such are a few of the occasions in savage warfare in which, during recent times, the Maxim and other machine guns were employed with manifest advantage. That such light and handy multiple guns are of inestimable value in trackless deserts, against a foe ill-armed with artillery, or with no artillery at all, will scarcely be disputed. Nor will it be gainsaid that for the defence of posts on the line of communication, or of bridges, villages, block-houses, trenches, etc., and, in attack, to intensify infantry rifle-fire, in the first line, at critical moments, or when mounted on galloping carriages, with which they are enabled to keep pace with cavalry in the roughest country, machine guns are, I contend, second to neither Howitzers nor any other field-gun, past or present, in "dealing destruction's devastating doom."

It is perhaps too early to comment assertively on the action of machine guns in the present terrible war in the Far East. But this much I venture to predict: That both sides will avail themselves most extensively of these man-killing weapons in land battles, and that, other things being equal, the general who utilises machine guns, in batteries and in sections, with most judgment, promptitude, and daring, will *inevitably* win the victory! And here I must offer a suggestive paradox, viz., the disparity between the number of rounds fired in any action, and the damage done by shot, shell, and machine gun bullets. Take, for instance, the official account of the naval action off Port Arthur on 22nd March. It was, as you may remember, the fifth attack of the Japanese fleet on the fortress, and Admiral Togo's report was that: "When the enemy's fleet steamed out of harbour, so as to entice us to draw nearer to the fort, the Russian fleet then shelled us indirectly. Many

of their shots fell near the "Fugi," but our ships *sustained no damage.*"

The questions of organisation and administration of machine guns have, I am glad to note, been happily settled by the recent order to attach these weapons in sections to regiments. There was, at one time, much acrimonious disputation on such matters. In my lecture, 1875, I said:—"Distribute Gatlings permanently among divisional field batteries, and they will often be committed to engagements at ranges beyond their powers, and their very existence may be forgotten on occasions most favourable to their small-arms rifle character. Attach Gatlings exclusively to cavalry, and they will sink into an inferior class of horse artillery, again losing distinctive characteristics. Finally, post Gatlings in fractional sections to infantry, and, in addition to difficulties of organisation and administration, they will become a stumbling-block, and, perhaps, a snare, for they may come to be regarded either too dependently, or not at all. On the other hand, if distinct organisation and latitude of action be allowed to them, so also, as I have endeavoured to point out, should the military education and tactical training of Gatlingers reach the highest possible mark." *Mutato nomine*, these remarks, I venture to think, still hold good with regard to the Maxim and Colt, or other machine guns. With regard to the Colt system, as mounted on Lord Dundonald's galloping-carriage, it is claimed that it is an ideal gun for practice with cavalry, and we will see further on whether its promises are borne out by its performances. Certainly, its appearance at the seat of war in Cuba was hailed with delight, as chronicled by the *New York Sun*, 15th June, 1898:—"The sight of these weapons was a most welcome one to the men, and it was not long before their continuous firing was added to the din. Back and forth across the chaparal to the west of the camp on the hill the guns were kept sweeping, until it was almost certain that no living thing could be concealed within the thick meshes of the bush." Between 1 and 1.30 o'clock the general fire was hottest. "Every fresh shot or volley from the bush was followed by the rattling clatter of a Colt gun, which made the rapid discharge of rifles seem slow shooting. The running fire into the woods at the foot of the hill and mountain was kept up, and from time to time the Colt machine guns were turned on those spots where reports or flashes showed the enemy to be. The little Colts began spitting, Howitzers roared, blue smoke arose where shells struck and burst in the chaparal, and rifles snapped angrily. As the men caught sight of the place whence the enemy's bullets came, there was trouble for the Spaniards in that stretch of chaparal."

In *The Times* of 12th February, 1899, appears an account of the campaign in the Philippines, as follows:—"The rebels when attacked fell back upon their main line. The 14th Infantry, the North Dakota Volunteers, and the 4th Cavalry then engaged the enemy, and drove them towards the beach, where the gun-boat received them with a fusillade from her automatic Colts. The enemy's loss was severe. They were scattered along the beach, and fled to cover." In the *Daily Telegraph* it is stated:—"Two guns of the Utah battery, under Lieutenant Critchlow, and a Colt's automatic gun, under Ensign Davis, absolutely smashed in and wrecked the insurgents' front works." As to the lightness, effectiveness, and handiness of the naval Colt, evidence is quoted to this effect:—"During the action (off Santiago) Chipman and his mate picked up their gun three times,

and carried it across from one side of the vessel to the other. For a small rapid-fire gun the execution we did was terrific. After the torpedo-boats surrendered, and the Spanish wounded had come on board, 17 or 18 out of the 21 were discovered to have been shot by the Colt automatics. Dr. Brandsford and his two assistants said that some of those wounded by the automatics were shot twice in the same spot! This shows the rapidity of the fire of these guns, for those so shot did not have time to jump before a second bullet came on top of the first. Our gun fired nearly 500 shots a minute." Machine guns were, we all know, employed in the several campaigns in Egypt, 1882-99, and more particularly at the battle of Omderman, when they were in charge of Major Garcia, R.A. On 24th November, 1899, Sir F. Wingate overtook the fugitive Khalifa, and entirely annihilated the Dervish army. In *The Times* of 31st January, 1900, the defeat of the Khalifa is thus described:—"The remainder of the artillery and Maxims were pushed on, arriving just in time to assist in repelling a most determined and bold attack by the Dervishes, which, owing to the configuration of the ground, the enemy were able to approach within a distance of 60 yards before they were checked by the steady fire of the Artillery, Maxims, and Camel Corps."

And now, at length, we arrive at the most momentous year of the late South African War, and through the courtesy of the Maxim and Colt representatives in London, I am enabled to trace the military history of these weapons from beginning to end of that great conflict.

On 16th January, 1900, an account of the battle of Modder River appeared in *The Times*, as follows:—"After a time we retired to a sort of reservoir, which made a capital fort, big enough to hold a brigade. We had here a Maxim, which did good work against some Boers we could see miles away to our right, either retreating on their horses, or trying to get round our flanks."

I must at once comment on this writer's exaggerated idea of the range of machine guns, which, of course, is only the same as that of a rifle, using similar ammunition.

It is, however, a moot point whether, in future, the ammunition for machine guns should not be somewhat more powerful, so as to command extended ranges. But this would involve special and separate cartridges. Then, again, in the *Newcastle Leader* of 5th February, 1900, we read that: "Two Maxims, under Captain Pelham, whose superhuman efforts in dragging them over the rocky kopje repaid him by his being able to pour an effective fire over the heads of the attacking party, and checking the fire of the enemy, added considerably to the success of the movement." Now let us for a moment consider the adaptability of the Colt automatic gun. The moment Lord Dundonald was given a command by General Buller, the Colt Company despatched to him a battery of guns, on the light carriages invented by his Lordship. These, as you all know, were attached to the Imperial Light Horse, and accompanied their cavalry leader into the beleaguered town of Ladysmith. The first mention of Colts in a general action was, I think, at the battle of Pieters. On the morning of 27th February, General Buller, having thrown a new pontoon bridge over the river during the night, crossed Barton's and Kitchener's Brigades, which came into line beyond the Tugela on the right of Hart's and Norcott's Brigades, which were holding the position previously captured. He then made a general attack on

the Boer left and centre. All the artillery, the naval guns, the Colt and Maxim batteries, and the rifles of the Border Regiment, as well as those of the South African Light Horse, covered the advance. By noon the kopjes were stormed, although the Boer artillery fire was sustained on both flanks. I am not aware whether the machine guns were attached to the artillery on that occasion, or upon any other during the war. For, generally speaking, I am told they were worked independently, and this course I, for one, have advocated from the first. But previous to the battle of Pieters, machine guns had been used at Spion Kop and elsewhere during those anxious weeks of fighting. On 18th February, Colonel Thorneycroft with his mounted infantry, and with three Colt guns, took up a position in front of Greenhill, and kept potting the enemy at every opportunity. Thus Monte Christo fell into our hands, and in the vacated Boer laager and trenches were found full unopened cases of Maxim-Nordenfelt cartridges, thus showing that the enemy appreciated the value of machine guns as quickly as ourselves. I believe that the Colts on that occasion gave every satisfaction, their closeness of shooting at the greatest ranges being of the utmost advantage. A further battery of these automatic guns were subsequently sent out in charge of Sir Charles Ross and Lord Athlumney, and did good service at extreme ranges, even up to 4,000 yards, or, at all events, the guns were sighted to that range, and were effective in dislodging the Boers from position after position at those extreme ranges. On 6th March, for instance, Dundonald's Brigade marched towards the northern end of the plateau overlooking the Tugela, and covered *with long-range* rifle-fire, *as well as by Colts and Maxims*, the advance of Barton's Brigade. In Ladysmith the 5th Dragoon Guards possessed a Maxim, and a Colt gun was mounted in the sangars constructed by the gallant Manchesters on the south side. This gun was manipulated by a retired naval officer, and we are told did excellent service on several occasions. Sir Charles Ross added a steel frame to strengthen his carriages when galloping over rough country, and found it to answer admirably. I may incidentally mention that the complement of a battery of 5 Colt guns (·303) is, I understand, as follows:—3 officers, 1 sergeant-major, 2 sergeants, 5 corporals, 48 privates, and 12 Cape "boys" to look after 60 horses and 36 mules. In the firing-line 3 men are attached to the gun, 2 in rear, with the reserve ammunition, and the remainder are with the supplies and stores. The guns can be taken into action as fast as a squadron of cavalry, and maintain a fire of 400 rounds a minute. The weight of a Colt is only 40 lbs., and the carriage is so light that one man can drag the gun-cart and caisson on an emergency. This gun, like that of other systems, is protected by a shield, which, however, was smashed to atoms on one occasion. It was on 30th May. Sir Charles Warren himself directed the fire of the reserves with the Maxim and Colt machine guns. They undoubtedly occupied the hottest corner in Faber's Farm at this action. Within a few moments of the Boer advance to attack, the two Colt guns opened fire, and pumped lead at 400 rounds a minute into the enemy. But the shield of one gun was smashed by the Boers—presumably, artillery fire—and the other was put out of action. The commander of the section was, I believe rightly recommended for a commission. But, better still, Sergeant Holland, of the Royal Canadian Dragoons, won the coveted V.C. for his splendid work with his Colt gun at the action on Komati River. He kept the Boers off the two 12-pounder guns by raining pellets

on them, and when at length the enemy got too near for him to escape with the carriage, he calmly lifted the gun off, and *galloped away with it under his arm*! A Canadian officer thus describes his experiences:—"In February, 1901, I was employed with a column sent forward to devastate the country in the neighbourhood of Dulstroom and Belfast. About noon, on the second day, the R.C.D.'s, with Howard's two Colts, were advancing in extended order towards a line of kopjes, with my guns in support, when we came to a spruit. My horses (which had been unlimbered) had just gone in when a Mauser cracked on the kopje in front of us, and the next moment a crashing rifle-fire ran along the crest. . . . To reinforce us, two pom-poms came up at a gallop, then the Gordons' Maxims, and, finally, the General himself, with the cow guns. When all this menagerie had got to work the row was awful. Fire was kept up for some time, when all at once, during a lull, I heard the unmistakable rat-tat-tat of Howard's Colts, away to the right front under the kopje. There was 'Gat.' and his men behind a little clump of rocks, not 400 yards from the top. The General sent at once for the infantry to attack the position, and, while the Gordons were deploying, the guns kept the ridge smoking with shells. It was fine to see the Gordons go in, cautious and steady, as if it was a field-day."

Here, I contend, machine guns turned the fortune of the day, and their commander, by his prompt audacity and independent action has shown the world how to use them successfully. At the engagement of Elap Kranz two galloping Colt guns did excellent service, and expended 15,000 rounds of ammunition between the hours of 10.30 a.m. and 5 p.m. (at least, so it is stated, although I think the statement is open to doubt). Four men out of the seven in the gun detachments were shot, and Sergeant Harrington, who worked one of the guns, was twice wounded, and his successor on the trail was shot through the thigh. The shields were pitted with Boer bullets, whilst out of the infantry escort—*i.e.*, 30 Royal Irish—19 were killed and wounded. One other instance only I shall quote in favour of the Colt automatic gun. At Nooitgedacht, in December, 1901, General Alderson's column marched to the relief of General Clements, taking with him a battery of four Colts. Two of these guns were sent into action at about 1,000 yards range from a Boer position on a kopje, and by their concentrated fire drove the enemy out of it in a few minutes. "But the Boers halted on another hill over 3,000 yards off, whence they were again routed by the splendid practice of these Colt guns. The Canadian Scouts then occupied the second position, and among the dead Boers they found one with several bullet holes in his head and chest, evidently the work of these almost too accurate automatics!" What one machine gun can do, so can another. I shall draw no invidious comparisons between them. Let the experts present describe their guns and pronounce their individual merits. As for me, I shall remain "true till death" to my first love—the Gatling. Perhaps, and no doubt, my lecture would by some of my audience be considered incomplete without mention of the new Danish magazine gun that has cropped up so opportunely, at the eleventh hour, to dispute the palm of excellence with machine guns extant, and which I am privileged to bring before you. For, strictly speaking, this musket-battery gun, as I may call it, does not, I think, belong to the class of weapons I have been describing. But special interest is taken in it owing to a recent trial of the weapon at Copenhagen, as witnessed by

our keen King, for whose benefit it was fired by a detachment of the Royal Danish Hussars (of which regiment Edward VII. is honorary colonel). It was fired at the rate of 300 rounds a minute (although it has yet to be explained whether that rate was sustained), and the Danish Minister of War has introduced it into both services, but chiefly as a cavalry galloping gun.

This mitrailleuse seems from its description to be simple in construction and manipulation, and its weight is only 14½ lbs. But I have not had time to study its exceptional powers. However, the inventor, Mr. Schonbol, is present to-day, and he is anxious, I believe, to exhibit his gun to the members of this Institution, and no doubt the opportunity will be afforded him.

I confess I feel some reluctance to put forward another weapon of exterminating propensities, although I am philosopher enough to say and believe that weapons of war cannot be too awful. Finally, mention of machine guns is reported in the papers of 2nd June, 1902, which was the date whereon "Peace with Honour" in South Africa was announced. A campaign against the Mad Mullah was then entered upon, and it was hoped that it would be of short duration. Colonel Swayne was, at all events, at that time in command of an ideal force, consisting of 2,000 Mounted Infantry, a Camel Corps, with Maxims, and 7-pounders, which was, you will admit, a compact, self-contained, and mobile little army—capable of going anywhere and doing anything. But the Somali campaign, has yet to be concluded! Quite recently, indeed, we were told that our forces would be withdrawn, that the Mullah had fled incontinently. But, as chronicled in yesterday's papers, the Mullah has come back again, and had again to be defeated by our bluejackets and Hampshires without even the aid of machine guns. The very latest allusion to machine gun fire-action was made in connection with our "little war" in South Nigeria last month. And I may here say that, so far as it goes, any machine gun is, literally, a host in itself. *Ergo*, the Maxim, under Lieutenant Mathers, Royal Scots, must have quadrupled the strength of Captain Hogg's small column in the fighting around the Assaba Hinterland. And I am glad to add that my young friend, Lieutenant Athol Moore, Dublin Fusiliers (who won his D.S.O. on the Tugela before he was 20 years of age), has again distinguished himself. Says *The Times* of 13th April:—"On the 19th January last an attack was made on Akuku. Severe fighting took place; for several hours the whole column advanced, and rear-guards were hotly engaged, but eventually, after a few well-directed shots from Lieutenant Vickery's gun, *and some fine practice by a Maxim handled by Lieutenant Mathers*, Captain Hogg and Lieutenant Moore led a charge which completely broke the rebels." And now, at the close of my remarks, may I remind you that machinery in all machine guns must be more or less untrustworthy. But what of that? If thoroughly skilled men, under an intelligent officer, can work these guns at moments that prove the turning points of battles, surely the end justifies the means, if victory comes of it! But let me say in conclusion, what I explained to my audience of 1889:—"One thing is quite certain, that an army on the defensive, such as our own, provided with machine rifle-batteries, would possess inestimable advantages, which appear to be lost sight of by those who affect to contemplate an invasion of our shores. Let us, for the sake of argument, suppose an enemy having run the gauntlet of our first line of defence—the silver streak of sea, Fleet,

torpedoes, and all—and successfully evaded our guns of position on the coast, still to have the temerity to advance against our capital, sending forward clouds of skirmishers supported by the distant fire of his artillery in rear. What happens? Every village, every copse, every stream, every hollow road, every hedgerow becomes a shelter-trench for the nonce, whence Gatlings, Gardners, Nordenfelts, Maxims or Colts would belch a continuous fire, disputing point by point in gradual retirement, and the game of wearying retreat would be played, until on a chosen spot a halt would be succeeded by a vigorous counter-attack which should crush the impudent invader! Do I exaggerate the case? Must we bethink ourselves of the fate of Paris, as pointing to a probable opposite result? The French possessed these desolating weapons, and of what avail were they to them? Did they retard the advance of their relentless foe even for an hour? Did they add one iota to their numerical strength? Did they encourage and promote a courageous resistance? Alas! that such reflections tend rather to damp our ardour for the proof, and induce us to marvel much whether a nation's pluck is not a destructible material, liable to fritter away into nothing when allowed to degenerate, and whether it may not be a matter of doubtful political expediency to disuse and emasculate a people's energies by entrusting the fate of a great country to the feeble guardianship of any mechanical contrivance whatsoever?"

The CHAIRMAN (Colonel G. W. A. FitzGeorge):—I trust there are some gentlemen present connected with either of the Services who will, on this occasion, give us the advantage of some discussion on the subject which the lecturer has propounded. The lecturer is a great enthusiast, as you will have observed, for his first love, and he will not even take "Maxims" up to date. There is one point which occurred to me as I was reading the lecture, and which the lecturer also told me about, and that is, that he wishes to strengthen the ammunition of the machine gun in order that it may have a longer range. But towards the end of the lecture he said that at 4,000 yards they did effective damage; therefore there is no particular advantage in increasing the power. But there is one disadvantage existing at present, as anyone who has studied service of any kind, afloat or ashore, knows, and it is keeping up the supplies of ammunition. Ammunition runs out very fast, as you know. A man tightens his belt, but the machine gets hungry, and the stuff goes through the gun very rapidly. I think, in view of the rapidity with which ammunition is used, that it should be standardised; that seems to be the point. I think we should standardise our ammunition, no matter in what mechanical way the bullets are sent on their errand of death. I think the ammunition should be uniform, so that when a man finds himself in a pinch he should not realise he has no more ammunition, because the battery next to him consists of guns of a different make: one perhaps is a Colt, another a Maxim. That difficulty would be got over if the ammunition were interchangeable, and I say it should be standardised, so as to be interchangeable. Our lecturer suggested it should have a longer range; but the moment you get that, the more kick you get from the machine, as well as a multiplication of ammunition, which might lead to confusion.

Colonel ROGERS:—I withdraw it.

The CHAIRMAN:—Very well. The lecturer recognises that there is something in my criticism. There is one little thing which I think the

lecturer did not happen to know, and that is this: I noticed the other day in a newspaper that when the Russian destroyer "Strashny" went down, the last thing which was heard was her Maxims firing, showing how easy it is to work the machine gun, even under the stress of a vessel sinking. I hope some of the audience who have had the advantage of working these guns in practice will now give us their views and the result of their experiences.

T. Miller Maguire, M.A., LL.D. (Barrister-at-Law):—I do not know anything about the subject from a technical point of view, Mr. Chairman, but I will take the part of "handy man" and step into the breach. I will, in my capacity of ignorant man seeking for light, give a lead for a few minutes. I see around me some experts who might throw some light on the subject; but it seems to me curious that a greater interest is not taken by the public at large and by soldiers in each and all of the subjects discussed here, on which the fate of our nation may depend in a crisis. I should have thought this room would have been crowded by officers and civilians interested in ascertaining whether or not these small, but apparently very quick, sharp, and incisive weapons of death may not play a still more decisive part in the future than they have done in the past. For my own part, I cannot add to the knowledge set forth by you, Sir, and by the author of the paper, one jot, and I really get up at your request to set an example of audacity, so that someone else may follow me and enlighten us by his knowledge. I agree in the main with the lecturer, but my historic recollection is not quite at one with his. These machines did not play such a little part in the Franco-German war as the learned lecturer seems to think. It is true that, in the series of defensive actions against the German hosts from the Rhine to the Moselle, and against the multitudes who pressed from that river on to Paris, they played little part; but then there were 600 or 700 guns in the field at a time, and there were colossal masses of Germans twisting round the French on every side. I do not pretend that these machine guns played a very decisive part in the engagements of Rezonville or Gravelotte or Sedan; but when the field of operations suited them they were most useful. The mitrailleuses were very inferior to the modern weapons. There has been a dispute between the Chairman and the lecturer as to the value of the Gatling and other guns, as to which I can give no information; but it was to these mysterious machines in their early development that Napoleon III. attached such an exaggerated importance. But when we come to the retreats in France, north and south of the Strasburg-Paris Railway, and when the retreating Army is compared on paper with the pursuing Army, you can see to some extent that the condition of the French force was favourable for these machines, but not so favourable as would be the situation of an English Army if it were driven back from Dover to London, or from Colchester to Birmingham. When the Germans were pursuing Chanzy, these machine guns, located in the forests and hedgerows and other close cover, had a very decisive effect; it was then that the mitrailleuse made its value felt. I think they were very useful indeed in the campaigns in January, 1871.

Colonel Rogers:—Yes, that is so.

Dr. Maguire:—I give an example from Chanzy's campaign: "The whole German Army now (7th January) passed into the district between the Loire and Sarthe, which consists partly of small plateaux, partly of a

labyrinth of ridges, which not infrequently attain a relative height of 200 feet or more. Well filled rivers flow with rapid course through valleys which are generally broad and with steep sides. The entire country is covered with the densest cultivation of long standing growth, with vineyards, orchards, and vegetable gardens. The villages consist mostly of a number of isolated and solidly constructed farmsteads, among which are interspersed châteaux, surrounded with extensive park enclosures and copses. Owing to the extensive sub-division of the land customary in the country, every property is surrounded by hedges, ditches, and walls" (very different indeed from Belgium, for example). "There are consequently numerous positions and isolated points at which even moderate troops" (and the French troops under Jauréguiberry were exceedingly moderate) "could defend themselves behind good cover. Although the superior effect of the Chassepots here ceased to avail, the mitrailleuses were in their true element, and became a dangerous weapon in the narrow passes. Even the commanding points seldom offer a free view to the assailant. He must abandon all idea of any planned deployment of large bodies, especially of cavalry and artillery. In the actions before Le Mans, the latter could seldom be counted by batteries, mostly only by divisions or single guns. The action of the cavalry was limited to the roads, and the infantry had almost exclusively to bear the burden of the struggle"—in point of fact, the German cavalry did very little at all; the only cavalry that did much was the 14th Cavalry Brigade (Schmidt's) of the 6th Cavalry Division: "It follows that in such country, the control of the higher commanders is rendered very difficult, and that independent initiative must be demanded of every leader." I do not know how far you will be inclined to apply those remarks, taken from the German official account, to the circumstances of our own country in the event of invasion. It might be a good lesson to try, for the several arms could be handled between Dover and London step by step. I pointed out all these facts in Woolwich in 1894, but in vain. Our Government was deaf and blind. I have been able to give an instance of the value of these guns in such territories as England, when it should become necessary to resist the invader. Nothing struck me as more peculiar in connection with that extraordinary and complicated machinery called a Government in these islands than that at the beginning of the late war in South Africa. No one in authority seems to have known anything about these machine guns. The big guns were not a revelation; but I was reading Colonel May's book on his experiences in South Africa, in which he said:—"The pom-pom came upon us absolutely as a revelation." Is not that an extraordinary state of things? Our friend, the lecturer, has been speaking about these guns, in season and out of season, for thirty years; and if he had been speaking for forty years it would have been all the same. Gallant officers have seen, examined, and practised with these for fifteen years, and yet the Government, the members of which are highly paid to look after the interests of the country, never seem to have heard anything about them till they were used by Boers against their own troops! I am extremely obliged to the lecturer, and to you, Sir, for asking me to speak, and for the patience of my audience; and as I have gone to the end of my tether of even ignorant audacity, I will sit down.

Sir HIRAM MAXIM:—I have not heard a word of the lecture, as I am rather deaf; but I heard what the last speaker said about the pom-pom, and if the British Govern-

ment did not know about the pom-pom it was not my fault, for there is no man who ever appreciated the value of that arm more than I did; and no man ever tried harder to get it into the Service, but it was always with the same fate. It was said that the gun is unnecessarily large to kill a man, and it is altogether too small to be considered as a piece of artillery; therefore there is no room for the pom-pom, or the 37-mm. gun, as we call it, in any branch of His Majesty's Service. Well, they said, suppose you have some of these guns; why a single piece of artillery will put a whole battery of them out of action in five minutes. But what happened? The Boers wanted some, and the directors of the firm sent the late Admiral Commerel round to the War Office, asking whether they objected to their selling their guns to some other nation. They said they had not the least objection. What happened in the end? We found that instead of a single piece of artillery putting a battery of these guns out of action in a few minutes, that three Boers with one of them put a battery of English field guns out of action. That is what took place. The history of this pom-pom has never been told. When I went into the machine-gun business, I was simply an engineer and electrician; but I have learned my trade fairly well. I made a gun and took it down to Hythe to fire in the presence of Lord Wolseley. The authorities there had never seen such a gun before. Usually guns used to jam; they could not fire them at all. I remember twenty years ago that there was a lecture about machine guns, and so much said about their jamming and getting out of action that the general opinion seemed to be that they were useless. When Lord Wolseley saw this gun fired at a target 600 yards away, which was made of cast iron, and when we ceased firing we heard forty shots strike the target after we stopped, it was very impressive. There were a lot of bullets in the air, and a lot of waves of sound coming back, and we heard those after the gun stopped firing. I had the honour of a seat at the right hand of his lordship, and we discussed machine guns, and some of the other officers joined us while they were smoking. And they asked me if I could make a machine gun which would have a range a great deal longer than the present one, that would penetrate a torpedo-boat, that the ammunition should not be too dear, and which would be quite as effective as a small gun for meeting a crowd of savages as swords. After studying the subject a long time I began. We had a large powder chamber, ¾-inch bore, a projectile the shape of those used in military rifles, but the bullet had a steel core in it, and the bullet was made in segments, and the sectors of this were made by the envelope of lead and tin. It was strong enough to hold the bullet together in flight; but if you wanted it to scatter you could move a little lever, which brought three or four points of steel in front of the middle and scratched the envelope and gave a scattering result, like grape and canister at short range. That seemed to meet every requirement. The question came as to whether it would not be considered an explosive bullet, because it all went to pieces. So I changed it so that the projectile weighed over one pound, and that was the pom-pom; and that is how the pom-pom happened to be made. That particular form of gun was very much enlarged. The first one used ammunition the same as the Hotchkiss, and afterwards they were made considerably longer for the U.S. Government, and still longer for the English. So the pom-pom at the present moment is rather a powerful arm, considerably heavier than at first. It first fired 400 rounds a minute, but I have reduced the speed down to 300. With regard to the Maxim guns, I know there are many people here who are interested in guns in various parts of the world, and who believe that

the Maxim gun makes a recoil. There was never a greater mistake in the world, because at the same time I commenced to make a gun with gases escaping at the muzzle. And I wrote to the Colt Company, telling them what I had, and suggested that they might work guns by the escaping gases. I patented it, and in my patent it shows its application to the gun which Colt's people were making at the time. They wrote that they did not think there was anything in it; that they did not intend to take up automatic guns, and ridiculed the idea of guns being worked by escaping gases. But they went on at once with the Colt-Hotchkiss gun, and they worked on the principles patented by me many years ago; and at the same time they patented those which worked with a recoil. So all the gas guns are as much Maxim guns as those which work with a recoil. Everyone in His Majesty's Service knows it is necessary to have a piston attachment, even on a Maxim gun. Blank ammunition does not give a recoil, and every gun which is used in manœuvres works with a piston. The recoil does absolutely nothing; but it has been found much better to allow the gun to recoil while the projectile is escaping from the barrel. If you take any of these guns—and I have made gas-worked guns which fire 5,000 or 6,000 rounds without any hitch, and no one else has done that—you find there is a tremendous jar on everything relating to the gun. Shooting is not so good, and there are various reasons why the recoiling barrel is the best. Mr. Albert Vickers, after seeing a great number of guns fired, concluded that there is no machine gun of any value unless the barrel is allowed to recoil. There is such a tremendous difference that I thought it was better to stick to the recoil system, and not gas-operated guns, although I brought them out at the same time. There are many other advantages connected with that system also; but I think as good an illustration as we can have is that the Americans have always looked upon the Maxim gun as having been invented and brought out in England, and as being an English gun, although I am an American myself. But in the end, although they favoured the Colt gun as being American, they were obliged to give it up, and now Colt's people are making a Maxim gun working with a recoil, and paying us a royalty at the present moment. So that is a pretty good indication that those which work with a recoil are better than those which work with gas coming out of the sides of the barrel. I had a dozen automatic guns working, all of them patented.

Lieutenant J. W. Dunne (Wiltshire Regiment):—I am not going to offer you the testimony of one who has worked these guns, but of one against whom these guns have been worked. A Matabele friend of mine told me he had no objection to the gun which spoke once (the rifle), or to the little gun which spoke six times (the revolver), but he could not stand the gun which went on talking like an old woman and never stopped. With regard to machine guns jamming, I think that the Maxim gun, though it jams, is easily enough put straight. I have trained two or three sections of men in regard to this particular gun. They have been men without any previous mechanical knowledge; but after a few weeks there was not one of them who could not put straight the most complicated jam in under a minute. The lecturer has said he rather dreads entrusting the fortunes of the nation to mere machinery, because of the liability of machinery to break down. But man himself is a machine, his sword and his rifle are machines, and the Maxim is merely an improvement on these rather elementary machines. If your machines can be quickly put straight, the jamming is not so serious a matter. We had a Colt gun

in our M.I. It did not jam often, but when it did jam, there was nothing to be done but to turn a hose on to it and leave it to cool. With regard to the uses of these guns, they are principally economical. Nowadays Armies are going in largely for loosely-aimed covering fire. Masses of men lie down and "brown" some particular piece of countryside. You do not see your adversary; he is away behind a rock. Individual marksmanship is not much use. The machine gun does not require feeding in peace time, and it can do that kind of work much better than the infantry man, and your infantryman is left free to manœuvre about, in doing which he is at his greatest efficiency. The machine gun will eventually take the place of those unwieldy crowds of partially trained men, which are only useful as shooting machines, and cannot be trusted with work requiring intelligence.

THE RUSSIAN SCHEME OF INSTRUCTION FOR BATTLE.

Translated by permission of the Chief of the 2nd Bureau of the French General Staff, from the "Revue Militaire des Armées Étrangères."

IN view of the war now in progress, the following *précis* of the Russian Instructions for battle may be of interest.

The Russian scheme of Instruction for battle for forces of all arms, which follows the Regulations for Service in the Field (Prikaz No. 171 of 1901), comprises 201 paragraphs, and is divided into nine chapters under the following headings:—

I. General Precepts.
II. Disposition for Battle.
III. Respective Duties of the Several Arms.
IV. Manœuvre in Fighting Formations.
V. Offensive Action.
VI. Defensive Action.
VII. The Characteristics of Night Fighting.
VIII. Orders for Battle.
IX. Duties of the Different Commanders in Battle.

We shall consider these chapters in succession, laying special stress on the most salient points.

I. *General Precepts.*—This short chapter is translated in full, in view of the importance of the principles it lays down.

"In battle, as in every encounter, success will be on the side of the man who knows what he wants, and who acts with the greatest energy and perseverance, and with a thorough knowledge of the matter he has in hand.

"The best way to beat the enemy lies in attacking him Consequently, the tendency to act on the *offensive* should be converted into a fixed principle at the time of each encounter.

"The *Defence* has equally the same object, viz., to beat the enemy; consequently, when one has to defend oneself, it is not sufficient merely to ward off blows, it is necessary also to strike them.

"It is essential always to strive to take the *initiative in action*, that is to say, we must not do what the enemy wishes, but we must compel him to do what we want.

"In battle, *the efforts of all the troops ought to aim at one common object; and everyone, from the Commander-in-Chief down to the private soldier, ought to recognise this object as the one it is his special mission to attain.*

"Every independent commander ought to preserve his independence. The superior should interfere with the dispositions made by

his subordinate only when they are not in harmony with the duty confided to him and with the general situation.

"One's dispositions ought to be kept from the knowledge of the enemy as long as possible; they must be carried out with diligence and thoroughness.

"The units engaged in battle must remain to the finish; *they can and ought to be supported; but withdrawn, never.*

"An unbroken enemy can only be crushed by a vigorous blow struck at a weak spot. Every effort should therefore be made to be stronger at that point where the blow is to be struck at the moment of striking.

"To this end, it is necessary to keep in hand a sufficient reserve, and to use it in good time."

II. *Disposition for Battle.*—It should fulfil the following requirements:—

a. All arms ought to be in a position to develop their full strength.

b. The reciprocal support of the different arms ought to be assured.

c. The form of disposition for battle ought to admit of piercing or enveloping the enemy, and of foiling his attempts to pierce or envelope in his turn.

Taking into account the nature of the ground and of the importance of different portions of the position, the disposition should scarcely ever have the same density of formation along the whole extent of front; it will be deepest at the important point (in the defence), and opposite the important point (in the attack), and thinner at others.

The disposition for battle includes the *Fighting Line*[1] and the *General Reserve.* This force is divided in units, each under its own commander.

Each of the units comprises in its turn a Fighting Line and a Divisional Reserve.

The duty of the Fighting Line consists in preparing the ground for the decisive attack by means of its fire and corps attacks.

The General Reserve is intended to *strike the decisive blow,* and to support the fighting lines.

The commander of the force has alone the right of disposing of the *General Reserve.*

The strength of the General and Divisional or Corps Reserves varies according to circumstances.

The *Artillery* can co-operate in a manner decisive to the issue of the battle, if from the commencement of the fighting it is more numerous than that of the enemy, so as to be able to obtain fire superiority. Consequently, it is best to immediately bring into position as many guns as possible.

With strong detached units it is useful to retain a part of the artillery for the General Reserve.

In the firing lines, the artillery is distributed between the units, or carefully grouped on separate positions, taking into account the nature of the ground and the extent of the fighting front.

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[1] Russian term, *boevaia tchast;* French, *groupe de combat.*

It is advantageous to keep the cavalry together. Squadrons may be detached to watch the flanks, and some small detachments may be furnished to the fighting units.

The Engineers are principally employed to superintend the fortifying of positions, but they can also execute the works themselves. They are not used as a fighting force, except in case of absolute necessity.

The extent of the fighting front depends on the strength of the force, the object to be attained, and the nature of the ground. The front of a battalion would be about 400 paces; that of a regiment 1,000; that of a brigade something over 1,000 yards; that of a division something over 2,000 yards; that of an army corps something over 3,000 yards.

The infantry of the *first line* covers the front, the *Divisional Reserves* being stationed in rear of the points of the sector where there will be most need of support, and at such a distance as will allow of their intervening with effect, of facilitating the exercise of command in the sector, and of being subordinate to the ground.

The General Reserve is stationed in rear of the most important point of the front, and, if the situation is badly defined, it must be where it can be moved as rapidly as possible to any sector of the position.

Up to the moment when it may be required, the reserve ought to remain out of harm's way from artillery fire.

In the Fighting Line the artillery will take up its position towards the centre of the infantry, and will be concentrated as much as possible to remain out of harm's way from artillery fire.

Supports in the proportion of one company to two or three batteries are detailed for the protection of the long lines of artillery; they are to be stationed so as to be in a position to carry out the duty assigned to them, exposing themselves as little as possible.

The *howitzer batteries* are kept in reserve up to the moment when the point of attack is fixed, but they can come into action sooner if a plunging fire is necessary to reach the objective of attack.

Before battle the *Cavalry* will move in front in order to ascertain the strength, dispositions, and direction in which the enemy is marching.

In the general dispositions, the cavalry will be stationed *in rear* of the infantry, and never on the same alignment, because it will require a certain amount of room in order to be able to charge abreast with that line.

If one of the flanks of the infantry is exposed, the cavalry is to place itself *en échelon* in rear of that flank.

It is necessary to avoid breaking up the cavalry, consequently, it will only be stationed in exceptional circumstances in rear of both flanks, when, for example, the front is very extended.

The Engineers are kept in the General Reserve when they have no particular duty to carry out.

In order to guard against turning movements, it is necessary to attentively watch the country on the flanks. Large guards must therefore be told off for this purpose, furnished by the cavalry, if there are any with the detachment; they must be stationed on the flank from a mile to a mile and a half away, and slightly in advance.

The Regulation then points out how the supplies of ammunition are to be distributed, and how the dressing stations are to be placed.

The *two-wheeled ammunition carts* of the first portion of the train remain with their regiments.

When the regiment detaches any battalions to the Fighting Line it supplies them with the necessary number of these carts.

The *two-wheeled ammunition carts* of the second portion of the train are brought on to the field of battle on the order of the commander of the force.

The batteries engaged have only with them one caisson per section, the others are with the *battery reserve.*

The limbers are to be placed as far as possible under cover, near the batteries, *en échelon* in rear of one or both flanks.

The *battery reserves* are under cover, at a distance of some 500 yards or more; those of the same group can be joined.

The *flying parks of artillery* can be ordered on to the battle-field by the commander of the force.

The *second portion of the regimental transport* is left at such a distance from the field of action that it does not impede the movements of the fighting troops.

The *dressing stations* are installed: the *advanced posts* with the infantry regiments in their sphere of action, and the *principal stations*, with the divisional hospitals, in rear, out of the range of fire, and close to water and a high road.

Communication between the various Units of the Disposition for Battle.—Communication is obtained principally by the effort of all towards a common object, by unity of command, and by the constant and mutual support of the mounted and dismounted arms.

The means to be employed by the different leaders are:—A regular organisation of mounted orderlies, if necessary by written communication and various technical mediums.

III. *Respective Duties of the several Arms.*—All arms ought to support and aid one another.

The *infantry* ought always to yield place to the artillery, because the artillery is more tied down by the nature of the ground than the infantry. It is only in the last phase of the battle, at the moment of the assault, that the artillery accompanies the infantry.

In default of the special support, the artillery is protected by the nearest infantry detachments.

The infantry co-operates by its fire with the cavalry at the moment of the charge, if within effective range.

Should the cavalry, after an unsuccessful engagement, retire in rear of the infantry, the latter will cover it and receive the enemy in order to allow the squadrons time to re-form.

The *artillery* should by its fire assist the action of the infantry and cavalry.

In attack, as in retreat carried out under the enemy's fire, these two arms are not to change their positions at the same time; the artillery supports the movements of the infantry, and the changes of position of the batteries are carried out under the protection of the fire of the infantry.

The artillery should not carry out short changes of position, but neither ought it to remain too much in rear of its infantry, always bearing in mind that its first duty is to aid its friends.

At the moment of the assault, the batteries, whose objective is masked, follow the infantry in order to support it and co-operate in

the pursuit of the disorganised enemy, while, in case of failure, they must cover the retreat by their fire, even at the risk of losing their guns.

The artillery ought to avoid firing over the troops, but it may do it if the range is such that there is but little chance of accidents, on account of the curve of the trajectory, and if the fire is likely to prove effective.

The artillery which has exhausted its ammunition is not to leave its position.

The *cavalry* protects the infantry against the enemy's charges, and assists in driving them back.

It supports the attack or retreat of the infantry by charging the enemy's companies.

If the enemy is repulsed, the cavalry completes the success of the infantry by an energetic pursuit.

If the issue of the fighting is unfavourable to the infantry, the cavalry is to charge in order to arrest or hinder pursuit.

IV. *Manœuvre in Fighting Formations.*—The *object of manœuvring* is to place the troops in a better situation than those of the enemy, and at the same time to avoid useless losses. This object is attained by means of movements adapted to the nature of the ground and the employment of a suitable formation.

It is absolutely necessary to avoid making changes of flank in front of the enemy, especially where the opposing units are close to each other; for this object, recourse will be had to oblique movements.

If it is necessary to *prolong* one of the flanks, it should be done by despatching units of the Reserve, and by withdrawing from the opposite flank, a corresponding unit to be placed in reserve.

If a break occurs in the fighting-line, the vacant space should be filled from the nearest reserve.

An enveloping movement is carried out concurrently with the frontal attack, use being made of the divisional or general reserves; the units which execute the movement gain more by a formation *en échelons*, then changing front in the desired direction.

An enveloping movement can be resisted:—

1. By advancing the reserves, so as to take in flank the units of the enemy engaged in the movement;
2. By throwing back the flank menaced.

One employs a turning movement when one has at disposal forces unquestionably superior to the enemy, or when the nature of ground particularly lends itself to the operation.

The artillery ought, so far as lies in its power, to move simultaneously into position. Before this is done, the commanders of the different artillery divisions should reconnoitre the ground in company with the leaders of the units placed under their orders, in order to choose the position for the guns, to arrange the disposition of the various units and to decide the most suitable means of access.

During these reconnaissances, the batteries are to occupy *provisional positions*, chosen so that the final position can be taken up without delay, when the moment comes.

If the ground is not undulating, the positions taken up should not be less than 500 yards off, and the movement should be carried out by *échelons*, so as not to interrupt the fire.

The *cavalry* should preferably pass by the flanks when moving to the front or retiring; however, when the front covers a good deal of ground it can pass through the intervals in the infantry lines, or even pass right through them, the order being given, *make way for the cavalry.*

Adaptation of the ground is characterised:—

1. By the choice of favourable positions for the artillery and skirmishers.
2. By the placing under cover of the reserves, ammunition waggons and limbers.
3. By the transfer of the reserves from one cover to another without being compelled to preserve distances with regard to the units posted in advance.

The formation of the units depends on the ground and the effectiveness of the enemy's fire:—

1. The infantry of the advance marching in the zone of enemy's fire, employs column of sections by the flank or else line formations.
2. The reserves under cover ought preferably to be in column; under fire of the enemy they use *échelonéd* line formations.

V. *The Offensive.*—The decision to attack the enemy ought to be irrevocable, and carried through to the finish; one must be resolved heart and soul to conquer or die.

Before battle, above all, account should be taken, according to the map, of the enemy's dispositions, his position approximately determined, and the question regarded from his point of view: "How can he best defend it?" According to this, the general dispositions for the attack are settled, the fighting formations adopted, and the action commenced with the primary object of finding out how the enemy is disposed, where his flanks are, which are the principal points of his position, and the easiest method of attacking him.

Only the information obtained on the ground itself can indicate how best to attack. It is important that the Commander-in-Chief should himself take part in the reconnaissance.

According to the information gathered, the plan of attack must be settled, and the principal point for it chosen, and the blow prepared.

The *object of this preparation* is to force the enemy to show his full strength, and the grouping of his forces, to wear him out morally and physically, and cause him to exhaust his reserves.

The conclusion to be drawn then is:—

1. Subject the enemy to artillery and infantry fire; then direct every effort to obtain the fire superiority, if not along the whole front, at least, at the most important points of the position to be attacked.
2. By means of feints, act against the less important points of the enemy's position drawing to them the greatest number possible of his forces.

Long-range firing is of little value; each unit must gain one after another the positions from which it can fire at effective range; the units then advance, taking up the most favourable positions for fire.

During this period of the battle, the artillery is engaged with the enemy's batteries, the infantry directing its fire on the infantry and artillery opposed to it.

The commander of the force takes advantage of halts of the firing line to select the *point of attack*, and concentrate in front of this point, the troops destined for the assault.

At this moment the artillery should concentrate its fire on the spot where the assault is to be delivered.

The advanced infantry units, on arriving at the last firing position (300-400 paces), and while waiting the arrival of the reserves, pour in as heavy a fire as possible.

The following may be taken as indications of a sufficient preparation for assault:—A weakening of the artillery fire, interruption and want of accuracy in the fire of the enemy's infantry; it is, however, impossible to determine absolutely when the moment for the decisive blow has arrived. It is a matter for tact and judgment on the part of the leader. *The order for the general attack* is given by the Commander-in-Chief.

When a unit undertakes an enveloping or turning movement, its march ought to be so regulated that its attack takes place at the same time as that by the other troops.

In order to obtain simultaneity of effort, the most advantageous method of proceeding is to fix by order the moment for the general attack, because the ordinary conventional modes of signalling may only lead to misunderstandings.

When the attack has commenced, it must be pressed home without any check, so that the enemy may not have time to recover himself. To this end, the divisional reserves attack *immediately after the first line*, and the *general reserve immediately after the divisional reserves*, so as to form in short one ever-increasing wave.

It is necessary to strike hard; consequently there must be no delay in calling on the reserves and altering their formation so as to strike with a compact mass.

The infantry should move to the assault without a check, with dash; units in close order should thus never halt to fire.

Those who are in rear press forward those in front.

The artillery supports the infantry by its fire at short range, directing it on the reserves.

The cavalry acts on the flanks and rear of the enemy.

In case of a check, the first thing for the infantry to do is to unmask the front of the batteries, which can then support the retreat.

When the position has been carried, the enemy must be given no rest, but must be kept on the run. This is the business of the cavalry; nevertheless, if the enemy has any fresh troops capable of offering resistance, the infantry must crush them. Thus, in the pursuit, the cavalry completes the rout of those already in retreat, and the infantry crushes those still offering resistance.

The day after the battle, the pursuit is carried out by the advance guard, which ought to consider outflanking movements its main objective.

VI. *The Defensive.*—Defensive fighting, like offensive, has for its object to beat the enemy; defence then is only effectual when a counter-attack is made, and, if the enemy is beaten, he is stubbornly followed up.

When he foresees that he will have to fight on the defensive, the Commander-in-Chief ought first to solve in his mind the problem, which is set his adversary, viz., "How attack the position?" In thus proceeding he can take seriously into consideration his weak points, and he can rectify the disposition of his troops and defects in his entrenchments.

In the defensive, it is necessary:—

1. Not to disclose the dispositions for battle until the attack of the enemy is developing itself;
2. To have a sufficiently strong general reserve.
3. To have sufficient strength of will to be able to refuse demands for reinforcements. In this respect, it is of extreme importance for a commander to be well acquainted with the character of his subordinates. Such knowledge only will enable him to determine what demands he shall pay attention to, because there are some men who will beg for help at the very beginning of an action.

In order not to reveal too soon its disposition, *the artillery* ought not to be in a hurry to open fire. The infantry utilises the formation of the ground in order to everwhelm the enemy by its fire, but it should not be drawn into opening fire at long ranges.

In the defence the principal object of the artillery and rifle fire ought to be to shake and disorganise the assailants; consequently, the artillery should, above all, strive to silence the opposing batteries, and when the point on which the enemy proposes to make his decisive assault is clearly indicated, the fire of the guns ought to be directed solely on the assaulting troops.

Timely opportunity should be taken to ascertain the distances of points situated within range.

During the enemy's attack, the defending commander ought to take advantage of every favourable chance, in order to *attack* in his turn, but after having repulsed the enemy, he should not pursue; by doing so, he would lose the advantages of his position, and would run the risk of finding himself engaged with fresh troops, and might even draw the enemy on to follow him up to his position. Consequently, if the enemy has a reserve, it is necessary, after having repulsed the first attack, to rapidly regain his position, reorganise his dispositions, and prepare to receive a new assault.

Attacks by the troops of the first line, supported by the divisional reserves, as well as by the infantry and artillery fire, constitute the best means of preparing for a change to the offensive with all available strength.

When the enemy discloses the direction of his attack, the divisional reserves close up, the general reserve advances to a point where it can best, in view of the nature of the ground, and according to the progress of the battle, move to the assault.

The general reserve takes cover as soon as possible and sufficiently near to move immediately into action, when necessary.

The artillery concentrates its fire on the infantry reserves.

The *assault* and *pursuit* are carried out as in the regulations for attack.

In case of retreat, it is necessary to cling as long as possible to each defensive position.

The *cavalry* ought to act simultaneously with the infantry at the moment when the latter assumes the offensive, in order to check any enveloping movement, and delay the march of the enemy.

In the defensive occupation of ground, it is necessary to strictly limit the construction of *artificial cover*. One ought to be careful in the employment of this, so as not to hamper one's liberty of action or uselessly to fatigue the troops by employing them in constructing merely temporary defences.

VII. *Characteristics of Night Operations.—Night operations* ensure the surprise of the attack and deprive the enemy of the possibility of learning the strength of the forces opposed to him; they allow of attacking the enemy without entailing losses by his fire.

It is necessary to bear in mind that troops are very impressionable at night, that it is difficult to direct the fighting and see what one is about, and that local obstacles encountered may easily lead to the disorganisation of the forces.

There are always the chances in night fighting of being able to bring off *a big coup with small forces*; what is particularly important is, *simplicity in the methods adopted*.

When a night attack is to be undertaken, it is in the first place necessary to *familiarise* one's self with the dispositions of the enemy, to reconnoitre *not only by day but also by night*, if possible, the ground on which the operations will take place, and to spare no trouble to obtain trustworthy and competent guides.

The principal *rôle* in night fighting falls on the infantry. The *cavalry* and *artillery* are attached to the force as a measure of precaution, and principally in cases where the development of the action may be anticipated when day breaks.

During the advance the artillery and cavalry should preferably be placed at the rear of the column.

It is sometimes useful to direct small detachments of cavalry on the flanks and rear of the enemy.

The infantry should be formed in double column with reduced intervals and distances, or in battalion column, the distances between the lines being diminished.

Patrols, furnished principally by the scouting detachments, and in general by men with sharp eyesight and quick of hearing, connect all the units of the force, and cover the front and flanks.

When an attack is made simultaneously on several points distant from each other, a separate column is directed against each, and the fighting carried on independently.

When the dispositions for fighting are made, and, later, during the subsequent movements the most complete silence is to be observed, there are to be no bugle calls, and the orders are to be given in a low tone of voice. On no consideration is smoking to be allowed or a light struck.

There is to be *no firing* during the march. On arriving close to the enemy, the assailants are to charge with the bayonet, without shouting of "Hurrahs" or beat of drums, in order to ensure surprise.

The *attack* is to be carried out principally by the Fighting Line; it is best to keep the reserve in hand in case *the battle is protracted to daylight*, and in order to provide against all contingencies.

No enveloping movement should be resorted to in a night action. The difficulty experienced in directing and ascertaining one's position shows that it is best to only carry out a night attack with small numbers.

If the forces at one's disposal are considerable, it is better to take advantage of the darkness to simply approach the enemy with the *object of attacking when day comes.*

In the *defensive* the troops occupy at night the position reconnoitred in advance; they remain concentrated on their positions.

Skirmishers are not thrown out, the leading companies are deployed, the reserves remain in column. Half the companies of the Fighting Line constitute the units on duty; they remain awake. Some *echelons* are disposed on the flanks.

The *artillery* is stationed in those sectors, from where it can by its fire co-operate in the defence of the most important points, the supporting troops being on a line with the guns themselves so as to afford direct protection.

The cavalry preferably is placed in the rear.

In order to cover the immediate front of the troops some *sekrety*[1] are posted at the points which the enemy cannot avoid.

The infantry only fires by volleys and by preference from rests; it then charges with the bayonet, the artillery opening fire at the closest range.

The reserves are to be economised as much as possible, so that if the fighting is prolonged into daylight there may be fresh troops to continue the engagement.

When a position of the enemy has been captured or his attack repulsed, it is absolutely necessary to make the troops *re-form.*

Pursuit is only possible with the units which have broken the resistance of the enemy.

VIII. *Orders for Battle.*—In this chapter the Instructions show how the *dispositions* or the orders ought to be drawn up, and that they ought particularly to include:—

1. The information about the enemy, and concise directions as to the position of the force itself.
2. The general object of the operations, and in the defensive the general line of the position.
3. The designation of the troops which form the Fighting Line, its redistribution into units, the leaders selected, and an outline of their special duties, then, in the attack, the instructions to be followed.
4. The composition, the commandant, and the position (or the direction of the movement) of the General Reserve.
5. The distribution and duty of the cavalry who do not form part of the constituted units.
6. The protection of the flanks.
7. The position of the flying parks of artillery.
8. The position of the general ambulance (eventual).

[1] *Sekrety*, special isolated posts, composed of carefully selected men, whose mission it is, by keeping a close watch on the enemy, to protect the sentinels and advanced posts against isolated attacks. They gain their selected positions by stealth, and are neither inspected nor relieved before their duty is finished. They keep touch with the rear by means of signals or orderlies; if attacked, they open fire in order to give warning of the appearance of the enemy.

9. The position of the 2nd class of the train, its commander, and its support.
10. The spot to which the reports are to be sent.
11. The officer to succeed if necessary to the command of the force.
12. Particular dispositions which it is necessary to communicate according to circumstances.

IX. *The Duties of the Leaders during Battle.*—We shall limit ourselves, without entering into details of the particular duties devolving upon the commander of the force, to quoting *in extenso* the general duties, and that of the officers commanding the reserve, the artillery, the cavalry, and engineers, the commanders of different units, and the officers of the General Staff, which form the subject of different paragraphs. These general duties are as follows:—

"In order to carry out with success the object of battle each leader ought, above everything, to be *determined heart and soul to fight the battle out to the finish*, and to fill his subordinates with the same determination.

"He ought also to foresee and examine all the means by which the best results may be obtained.

"In moments of difficulty the leader must remember that there is no situation from which it is not possible to emerge with honour. And in these moments he will not spare himself if he is determined that his subordinates also shall not spare themselves.

"Before fighting, the leader will himself reconnoitre the ground and the enemy, because he *must never throw on another that which he can do himself.*

"In working out his plan of action, the leader ought first to solve the *problem* by putting himself *in the place of the enemy*—for example, if he is thinking of taking up a given defensive position, he should ask himself the following question:—'How shall I attack this position?' If, on the other hand, he is going to attack, his question will be:—'How shall I defend this position?' Next, he must consider what he will do should the enemy show himself on the front, the flanks, or in rear.

"The leader ought to communicate his plan to the officers who might have to succeed him.

"After having solved his special tactical problem each leader must endeavour never to lose sight of the general mission confided to the force.

"He ought to show initiative and take an independent position in cases where it is necessary to give immediate help to troops in his vicinity, or when the situation of the battle has suddenly altered and new orders have not been received.

"He ought then immediately to report to the superior who has given him the task he is carrying out."

The Instructions conclude by some *precepts for the soldier before battle*, in which are brought to mind the principal maxims of General Dragomiroff.

We give them in full:—

"Every soldier ought to steadily assimilate the general principles which follow:—

"1. Die, but save your brothers.

"2. Always advance! Even over the corpses of your comrades!

"3. Do not fear danger! Whatever the difficulties, victory will surely be yours.

"4. If the situation is difficult for you, it is not less so for the enemy; his may perhaps be even more difficult than yours; you see your difficulties, but you do not see his, although they certainly exist. Consequently, never be discouraged, but be bold and determined.

"5. On the defensive, conquest is still your aim. Do not merely content yourself with warding off the blows of the enemy—attack is the best means of defence.

"6. He is the victor in battle who is the most determined and most fearless; it is not the strongest or most active. Victory is not obtained by a single blow. The enemy is also persevering, and sometimes a second or third blow will not win victory. Then it is necessary to strive a fourth time, or even again, until victory is achieved.

"7. More or less skilful dispositions will allow of an object being attained with a *minimum* of loss, but they only smooth difficulties; that man only will see his efforts crowned with success who is resolved to die rather than not conquer.

"8. Whatever the unexpected obstacles may be that are met on the road to victory, it is necessary to consider the best way of surmounting instead of grumbling at them.

"9. With good soldiers there are neither rear nor flanks, but only the front where the enemy is.

"10. However unexpected may be the appearance of the enemy, two things must be remembered: it is possible to beat him either with bayonet or by rifle fire. To choose between the two is not difficult, and the formation is a minor consideration. If the enemy is close, always the bayonet; if he is at a distance, at first rifle fire, then the bayonet.

"11. There is no situation from which it is not possible to emerge with honour.

"12. In battle there is no relief. Once engaged in fighting, you must remain to the end; you will be supported, but never relieved.

"13. While you are fighting, your care is solely for those who can continue to fight; it is only after having beaten the enemy that you will think of the wounded. He who troubles himself about them during the action and quits the ranks is a dastard and a knave, and not a man of courage. It is not his comrades whom he cares for, it is his own skin. For the purpose of relieving the wounded there are always special men told off.

"14. When you are the leader do not interfere with your subordinate when you see things are going well; in battle you will have enough to do looking after your own business. He who troubles about what others ought to do neglects his own work. Each rank ought to have its own duties and responsibilities. If the first is not respected, the second will at once disappear. In a word, the leader should insist on everyone doing his duty and excuse nothing."

* * *

These new Russian Instructions, which have been in force since 1901, are founded on the maxims of the well-known General Dragomiroff, the eminent soldier, who has for long been the principal Instructor of the Russian Army, and whose long and distinguished career has recently been brought to a close by his retirement. General Dragomiroff was a devoted admirer of the great Field-Marshal Suvarov, and his military maxims are admittedly founded on the precepts of that great commander.

CAMPAIGNS AGAINST INDIA FROM THE WEST AND THROUGH AFGHÁNISTÁN.

Translated and condensed from the Russian of Major-General L. N. Soboleff, by Lieut.-Colonel W. E. GOWAN, Retired, Bengal Army.

Continued from August JOURNAL, p. 946, *and concluded.*

NÁDIR-SHÁH, FORMERLY KNOWN AS "NÁDIR-KULI-BEG."

(A PERSONAL SKETCH.)

WHEN a man with the mysterious name of *Nádir-Kuli* ("the slave of 'The All-Wonderful'") made his appearance, and, by the greatness and rapidity of his first deeds of prowess, showed that he would be no ordinary man amongst men, as is always the case in Eastern countries, reports, often exaggerated, concerning him were carried far and wide. And men asked each other: "What manner of man is this? Whence is he? And what destiny has he come to fulfil?" The answers to the two last questions will be found in the foregoing pages. As to the first question, the answer is supplied in the following sketch, which is taken from Mr. James Fraser's History already quoted.

"Nádir-Sháh is about fifty-five years of age, is upwards of six feet in height, well-proportioned, and of a very robust make. He is inclined to corpulency; but the great amount of fatigue, which he undergoes, checks this tendency. He has fine large black eyes and eyebrows, and is, in short, one of the most comely of men. Through exposure to the sun and weather, his complexion has become tanned, but this only gives him a more manly appearance."

"He rises early, being up and about every morning by 5 o'clock. Although addicted to sensuality, he never neglects his business on this account."

"His meals are over generally in less than half an hour, his diet being very simple, consisting chiefly of *pilláo* (meat boiled with rice, and highly seasoned) and plain dishes, and after partaking of these, and of wine, in moderation, he at once returns to business. If, however, public affairs require his close attention, he neglects his meals altogether, and satisfies his hunger and thirst with a few parched peas (of which he always carries a supply about his person) and a draught of water."

"Whilst in camp or city, he is almost always in public, and, if not present, he may be sent to, or spoken with, by any person. Besides this, he makes it a rule every day, after Morning Prayer, to take his seat upon a throne, the canopy of which is in the form of a golden dome. Round this are grouped a number of young men bearing Royal Standards of red silk, affixed to lances with silver heads and tassels. And numerous slave girls stand on his right and left hand respectively. All the great men of his Court stand in front of him. and the *Arz-Begi*

(or the official whose duty it is to present all petitions, either written or verbal) attends in readiness to act as required."

"Everyone has his cause decided at once, and bribery is not so much as known at his Court. The proceedings on these occasions are often of such long duration that the various attendants, who stand the whole time, have to be constantly relieved. At noon there is a brief adjournment for the mid-day meal and for repose; but as soon as the Afternoon Prayer is over, Nádir-Sháh again takes his place on the throne, and business is resumed and is continued until the hour for Evening Prayer."

"At this time Nádir-Sháh usually retires to his private apartments, where he at once unbends and throws off the cares of State, occasionally inviting some of his favourites to sup with him, and conversing with them in the freest and most facetious manner. In the course of such private intercourse, however, no one is allowed to refer to any public business, nor must he at any time presume upon such intimacy by behaving with greater familiarity than with an equal. On one occasion two of Nádir-Sháh's boon companions, having transgressed in this way by taking the liberty of advising him in public on the strength of their admission to his private circle, he at once ordered them to be strangled, saying: 'Such fools are not fit to live, since they cannot distinguish between *Nádir-Kuli and Nádir*-Sháh (*i.e.*, *Nádir*, 'the slave,' and *Nádir*, 'the King'). On the other hand, whilst he has been very kind to those who have pleased him in private and who have behaved with becoming decency and deference in public, yet afterwards he has taken no more notice of them, nor have they had any greater influence over him than have others of the same rank."

"On another occasion, in the year 1737, Nádir-Sháh's mother, at the request of some members of the Persian Royal Family, having entreated him to restore the deposed Sháh Tahmásp to the throne, he asked her whether she really thought he would do so. She replied that she did. Whereupon Nádir-Sháh smiled and said: 'If I were an old woman, like you, perhaps I might be inclined to think so too.' He then desired her to give herself no further trouble about State affairs."

"Nádir-Sháh has monthly accounts transmitted to him regarding affairs in all parts of his vast dominions, and he keeps up a correspondence with his numerous private spies in every place. Moreover, in every province and town he has a person, called *Hum Kalam*, whose duty it is to inquire into the particular Governor's or other official's actions, and to keep a register of the same. No affair of any consequence can be transacted except in the presence of this representative, who, besides the account which each Governor is required to send in monthly, transmits his journal, by a separate messenger, whenever he thinks proper, without permitting the Governor to peruse it. This *Hum Kalam* has no settled salary or gratuity for his work, but is either rewarded or punished just as Nádir-Sháh thinks he deserves. This extraordinary caution and personal supervision on the part of the Sovereign prevents, in a great measure, any Governor oppressing the people, or entering into any conspiracy or rebellion against himself."

"Moreover, Nádir-Sháh has most particular and precise information given to him in this way of everything that passes, and all criminals, great and small, rich and poor, meet with immediate death. Indeed, he never pardons the guilty of any rank or class whatsoever, and he is highly displeased if, after he has thoroughly examined into any matter, any person should presume to intercede on behalf of a

delinquent; but *before* he has done so, he may give utterance to his sentiments with freedom."

"When on the march or in the field, Nádir-Sháh is contented with the same provisions and means of rest that any common soldier can obtain, and he inures all his officers to the same severe discipline. He is of so hardy a constitution, that he has often been known to sleep upon the bare ground in the open air during a frosty night, wrapt in his cloak, with only a saddle for his pillow, especially when, upon any extraordinary occasion, during an expedition, he has been obliged to out-march his baggage train. In this way he has often fallen upon his enemy when he least expected him to appear. He is never more happy than when on active service, and he grudges the time in which he has to halt to refresh his troops, and in this, as in all other things, he exercises the utmost despatch."

"He musters, pays, and looks after the clothing and equipment of his army himself, and he will not suffer any perquisites to be taken from his soldiers by their officers on any pretence whatever. Indeed, he is extremely generous, particularly to his soldiers, and bountifully rewards every man in his service, who behaves well. He is, at the same time, very severe and strict in his discipline, punishing with death anyone who commits a great offence, and depriving others of their ears who may be convicted of minor transgressions."

"Nádir-Sháh's voice is so uncommonly loud and strong that, without straining it, he can give clear orders at a remarkable distance."

"Nádir-Sháh's eldest son, Riza-Kuli-Mirza, who from his childhood was trained to be a soldier, has been allowed to work his way up, like anybody else, and was only gradually advanced to the rank of general, and not until he had shown his fitness for the post was he appointed Viceroy of Persia during his father's expedition to India."

"Moreover, when he held the rank of lieutenant, he received only the pay of that rank, and in all his other stations in life he was allowed no more than the emoluments of the particular office. Indeed, Nádir-Sháh looked upon him in no other light than that in which he regarded his other officers, who were his associates; and he also gave him to understand that if he was guilty of any crime or breach of duty, he would be punished with as great rigour as any other man. It was only after he had behaved well that he promoted him and increased his parental affection for him. Riza-Kuli-Mirza, indeed, gave signal proof of his courage and conduct on several occasions, and, whilst his father was in India, he displayed great abilities in other ways, so that, in his father's absence, he governed the Persian Empire with great skill, and kept every part of it quiet and easy until his father's return."

One other of Nádir-Sháh's extraordinary faculties should here be mentioned as worthy of admiration, viz., his wonderful memory, which enables him to recollect everything of interest that he ever said or did. He can also readily recall the names of all his principal officers in his numerous army, and he can at once recognise any soldier who has ever served under him, and can bring to mind when and for what incident he had either punished or rewarded any of them. Whilst dictating anything to a secretary he can, at the same time, give orders about other affairs with all the regularity and promptness imaginable."

"On the battlefield his surprising quickness in discerning the odds on either side is almost incredible, whilst his quickness of selection of the points at which his troops will need succour is altogether astonishing. As to his handling of troops before the enemy, if any of his

general officers give ground before he has been greatly overpowered, he will ride up and kill him with the battle-axe, which he always carries, and then give the command to the next in rank who happens to be on the spot."

"In all the battles, skirmishes, and sieges in which he has been engaged, although he generally puts himself at the head of his troops, he has never received the least wound or scar,[1] though several horses have been shot under him, and bullets have even grazed his armour."

"Such are amongst the many remarkable things concerning this great hero, whose performances, often with poor resources, both in men and money, have shown that few ages of the world have produced his equal."

Campaigns against India Undertaken by Ahmad-Abdáli.[2]

Nádir-Sháh's violent death served as the signal for numerous upheavals both in Persia and Afghánistán, and it was the occasion of a fresh campaign against India, this time by an invader of the Afghán race.

The very day after Nádir-Sháh's murder, Ahmad-Sháh, chief of the Afghán tribe of Abdáli, having received support from the Uzbaks, attacked the Persian troops. But being repulsed, he left Nádir-Sháh's army, and proceeded, by forced marches, towards Kandahár. On the way he seized a huge treasure train which, laden on 3,000 camels, was being brought, under escort, to join the army of the murdered Sháh of Persia. And soon after he had reached Kandahár, with the money thus obtained, he set to work to lay the foundation of another powerful Afghán monarchy.

Meanwhile, the troops had elected Ali, Nádir-Sháh's dearly loved nephew, to be sovereign in his stead. The first act of the new Sháh was the issue of a manifesto, in which, after speaking of the cruelties of the deceased, he announced that his uncle's murder was carried out by his order. By this announcement he wished to pacify the country, and to show that the new rule would be more humane than the previous one. And, in order the more readily to obtain the good-will of his subjects, he further announced that all taxes for the year 1747 would be altogether remitted, and that a considerable lightening of such dues would be effected during the two following years. But all such promises speedily came to naught, because immediately after his coronation he displayed great weakness of character, and, worse still, a blood-thirsty disposition. The consequence was that some of his troops proceeded to attack Kalát-i-Nádiri, wherein the sons and grandsons of Nádir-Sháh had taken refuge, and wherein all the untold wealth, collected by the great Turkumán had been stored. Kalát-i-Nádiri was captured, and all three of Nádir-Sháh's sons, with their children, with one exception (19 souls in all), were then murdered;

[1] This is not correct, as the narrative shows that he received a spear thrust in the leg in one of the fights against the Afgháns.—W.E.G.

[2] Also called "Duráni." "Afgháns of this tribe were known always as 'Abdáli,' until their name was changed by Ahmad-Sháh, when he took the title of 'Dur-i-darán.' The Duráni territory lies in the south-west of Afghánistán, between Kandahár and the Persian frontier. By religion, they are *Sunni* Muhammadans, and their language is *Pashtu*. The Sadozai and Barakzai, are clans of the Duráni tribe." *Anglo-Indian Dictionary*, by George Clifford Whitworth.—W.E.G.

even the blinded Riza-Kuli-Mirza was not spared. The one of Nádir-Sháh's grandsons, who was not killed on this occasion, was Sháh-Rukh, and he was then a boy of fourteen. Being desirous of getting rid, at all costs, of every rival, Ali, who had taken the title of Adil-Sháh, began with a bountiful hand to dissipate the valuable treasure obtained from his murdered cousins. But all to no purpose, for he was speedily overthrown, and his person having been secured, he was deprived of sight by the order of his own brother, Ibrahim, who then became Sháh.

His reign, however, was of less duration than his deposed brother's, for, having been seized by his own troops, he was interned at Mashad, and was soon afterwards slain. Sháh-Rukh, the sole grandson of Nádir-Sháh, who had escaped the slaughter at Kalát-i-Nádiri, was then proclaimed Sháh of Persia. He was a benevolent and attractive boy, and was beloved by the Persians. Notwithstanding this, however, he soon encountered a sworn enemy in the person of Mirza-Sayad, son of the High Priest of Persia, and a descendant of the Imperial dynasty of the *Sufis* or *Safávis*. This pretender to the throne began to sedulously spread abroad the report that the youthful Sháh-Rukh hated all adherents to the *Shiáh* sect. Having in this way gathered around him a body of fanatics, he suddenly fell upon the newly proclaimed Sháh, and after securing him caused him to be blinded, and then proclaimed himself Sháh of Persia. But, in 1750, Mirza-Sayad himself was murdered, and the blind boy, Sháh-Rukh, was once more placed upon the throne. The author of this fresh *coup d'état* caused himself to be appointed regent, but he was soon strangled, and the wretched grandson of Nádir-Sháh was again incarcerated.

Meanwhile, Ahmad-Abdáli, who had by this time established his position in Afghánistán, made his appearance at Herát. From here he rapidly incorporated in his Empire Mashad and the country round. He could then have easily conquered the whole of Persia, but such a conquest had no attractions for him, because, as we have already seen, that country was again in a state of terrible disruption. Indeed, the condition of affairs that therein existed prior to Nádir-Sháh's appearance was once again the order of things. The governors of provinces declared their independence of the Central Government, and numerous pretenders to the throne itself came forward. Ahmad-Abdáli, however, having summoned a council of popular representatives, proposed to them the formation of an independent sovereignty out of the province of Mashad, and he further suggested that the unfortunate Sháh-Rukh should be placed upon the throne of the new State. In making this proposal Ahmad-Sháh wished to confer the province, which he had himself re-conquered, upon the grandson of Nádir-Sháh, to whom he himself owed so much. The suggestion thus made was assented to.

The new sovereign of Afghánistán now cast his eyes towards India, which, although it had been grievously pillaged by the great Turkumán, was still a very rich country. He had already formed a powerful army, composed of officers and men experienced in warfare, and inured to all the privations which are incidental to all serious campaigning. With this formidable force he first of all occupied Kábul, and then marched towards the Panjáb.

Almost inconceivable chaos reigned at this time throughout Hindustán. The blow, which Nádir-Sháh had dealt on this unfortunate

country, had indeed been a fatal one, and when he withdrew he had opened wide the gates to the English merchants now settled in various parts of the country. Although immediately after Nádir-Sháh had left, that cunning old man, the Nizám-al-Mulk, had taken into his own hands the reins of Empire, still, he was not the person to uplift the Imperial authority according to the true acceptation of the term. The intractable rulers of the several provinces and congeries of States, of which India was then and is still composed, perceiving the weakness of the Court at Delhi, declared their independence of it, and would not listen with respect to anything coming from the Central Government. That scourge of the Indian Empire, the Mahratta race, having invaded the Carnatic, plundered its inhabitants, and these same marauders also laid a heavy indemnity on the rulers of the Deccan. Moreover, there began to set in a series of terrible devastations in the very heart of the Empire. One Hindu princeling, a mere upstart of low origin, collected a force of 12,000 men and had the temerity to proclaim himself Emperor; but his presumptuous following was quickly scattered. Finding that he was not likely to succeed with Imperial affairs, the Nizám-ul-Mulk appointed his own talented son to represent him at the Court of Delhi, and then, having placed himself at the head of an army of 300,000 men, marched towards the Deccan, and finally appeared at Arcot. From here, without firing a shot, he rapidly acquired the whole of the vast province of the Deccan.

In 1742 the Tartar Aliverdi, so well known to us as the bold adventurer, having possessed himself of the provinces of Bengal, Behár, and Orissa, declared his independence. Muhammad-Sháh, that weak occupant of an Imperial throne, instead of marching at the head of a powerful army to compel the submission of this unruly vassal, could think of nothing better than to incite the Mahrattas to invade Bengal. Accordingly, 50,000 of them, under the leadership of Boskar Pandit, invaded that province and carried through it fire and sword. But the crafty Tartar, far from desiring to enter upon an open war with such an enemy, contrived by the way of treachery to bring about the death of the Mahratta leader, whereupon his band at once withdrew. On hearing what had taken place, Sahu or Shao, the chief of the Mahrattas, was greatly enraged, and sent into Bengal two fresh bodies of men. But even then the wily Tartar kept his head, and after contriving to entangle the two Mahratta generals in a fierce quarrel, he paid to one of them the equivalent of two years' revenue and induced him to quit the country. This move having been carried out, the other leader thought it best to retire too. Thus the Tartar triumphed, and having secured his independence, obtained from the Emperor, after some trouble and demur, for appearance's sake, his investiture as independent ruler.

In 1744, in the provinces nearer Delhi, a Rohilla Afghán, named Ali-Muhammad, rapidly gained the ascendant. He was indeed a man of no mean capacity. At first a simple soldier in the Imperial army, he soon rose to the command of 300 Afgháns enrolled in Kábulistán. After attracting attention by his valiant conduct, he received an administrative post somewhere to the north of Delhi. And he took care to devote the whole of the revenue which passed through his hands to the maintenance of troops composed of itinerant Afgháns who happened to come his way. Having received an order from the Delhi Court to pay in the revenue of the post which he occupied, he

returned no answer. Thereupon a force of 15,000 men was sent against him. These he defeated, and then proceeded to secure his position more firmly. Subsequently the *Wazir* sent his own son, at the head of 30,000 men, to compel his submission. But the commander of this second Imperial force, on discovering that Ali-Muhammad had taken up a strongly fortified position, remained for three months on the banks of the Ganges doing nothing, and then opened negotiations with the new rebel. The result of these was that Ali-Muhammad was confirmed in the position of ruler of the territory which he had filched, on condition that he should pay within four months one year's revenue. Of course, Ali-Muhammad had no intention of doing anything of the kind, and he continued, as before, to make his position still more secure, and to enlarge the area of his possessions.

At last the pusillanimous Emperor thought it about time to go himself against this now formidable personage, and so, in 1745, he marched against him with an army of 60,000 men. Ali-Muhammad was then besieged in the fort which he had constructed, and though he endeavoured by a series of fierce sorties to beat off the investing army, he was at last obliged to capitulate. The leading men of the Rohilla Afgháns having interceded on his behalf, Muhammad-Sháh appointed his prisoner to the post of ruler of Sirhind. Here he ultimately acquired more power than he had before, and the thought of paying yearly tribute to his Suzerain apparently never entered his head.

Such was the position of affairs in India when there swooped down upon this distracted country yet another invader, this time one of the Afghán race.

We have already said that Ahmad-Sháh Abdáli, the founder of this new Afghán dynasty, had gained possession of Kandahár, Herát, and Kábul. Now, soon after doing so, he made himself master of all the Indian provinces which had been ceded to Nádir-Sháh. His dominion, in fact, was of almost equal extent to that of the Ghazni Empire, and the whole of it had been acquired in the space of one year!

In 1748, Ahmad-Sháh, at the head of 50,000 horsemen, advanced against Delhi, and on the road he levied heavy contributions from the inhabitants. Consequently, on hearing of his approach, the people of Delhi were driven to despair. To oppose the new invader, Muhammad-Sháh sent out an army, this time of mounted men, to the number of 80,000, and he entrusted the command to his own son, the heir to the throne, and to his *Wazir*. The two armies sighted each other near Sirhind; but no engagement took place for a whole month. Meanwhile, the opposing forces proceeded to fortify their respective positions, to watch each other, and to enter into futile negotiations. At last Ahmad-Sháh, who had posted his guns rather skilfully, ordered fire to be opened upon the centre of the enemy's position. One of the projectiles from these guns happened to strike the tent occupied by the *Wazir* just at the time when he was engaged in evening prayer, and killed him on the spot. Fearing lest the news of the *Wazir's* death would cause a panic amongst the Indian troops, Muhammad-Sháh's generals decided to conceal what had taken place, and to attack the Afgháns. Accordingly the dead body of the *Wazir* was propped up on an elephant, and, thus deceived, the Indian troops advanced. Their attack was so impetuous that, in spite of a most stubborn

opposition on the part of the Afgháns, their camp was captured, and they began to retreat. Unfortunately, however, for the Indians, the fact of the *Wazir's* death somehow became known, whereupon one of the Indian generals, commanding a body of 20,000 horsemen, took to flight. At his heels went the rest of the Indian army, and the victory, which had been already gained, was rapidly being changed into an utter rout, when the son of the deceased *Wazir*, being the only man to keep his presence of mind, managed at length to rally the men under his immediate command, and to induce them to follow him right into the centre of the pursuing Afgháns. This brave deed arrested the headlong flight of the other Indian troops. Finally, the Afgháns, unable to withstand the shock of the second encounter, drew back and yielded the battle-field to their enemy.

Although the victory then remained with the Indian forces, Ahmad-Abdáli, by adopting the most strenuous measures to restore order in his shattered ranks, managed to bring them together again in the course of a single night. Accordingly, when day dawned, much to the surprise of the triumphant Indians, they saw the Afgháns once more drawn up in battle array, and ready to attack them. Ahmad, perceiving that his enemy's position was a strong one, and capable of offering a vigorous defence, resorted to tactics which he had learnt as a leader in the ranks of the famous Nádir-Sháh. He refrained from making a frontal attack, and for two days apparently confined himself to artillery fire and petty engagements. Thus emboldened, the Indians made a counter-attack on the third day, and having forced the Afgháns to evacuate their position, obtained possession of their guns and baggage train.

They then supposed that their success was complete, so it came upon them as a great surprise to discover that the Afgháns, after making a forced march of some 30 miles, had crossed a river in their rear, and were now between their main body and the capital of the Indian Empire. But what the Afgháns did not know was this, viz., that a fresh army was advancing from Delhi under the command of the capable son of the Nizám-ul-Mulk. Consequently, they unexpectedly found themselves between two forces of the enemy. Had Ahmad-Abdáli then thrown himself upon this fresh army, which had been hastily collected, he would in all probability have achieved success; but his undisciplined forces refused to follow him in this obviously wise course. Hence he had no other alternative than to make preparations to attack the army which was now in his rear. This was, of course, not only a great mistake, but it led to the commission of another; for Ahmad-Abdáli, having at the last moment decided not to make a direct attack on the enemy's rear, resorted to an attempt at turning the Indian flank by a movement towards Lahore.

Fortunately for him, an unexpected event now occurred, for news was received in the Indian camp of the sudden death of the Emperor Muhammad-Sháh. This unfortunate sovereign, on hearing of the death of his friend the *Wazir*, in whom he placed the most complete confidence, had lost all presence of mind, and passed the whole night in bitter tears. The next morning, as he sat upon his throne in the audience chamber, after suddenly exclaiming, "Oh, cruel fate, I have lost the support of my old age!" he was seized with convulsions, and instantly expired.

The heir to the throne, who was, as we have seen, in command of the northernmost Indian army, on hearing of his father's death, at

once started for the capital, where he announced that whoever should drive the Afgháns out of the Panjáb would be appointed governor of Lahore. Finally the late *Wazir's* son was deputed to carry out this task. Meanwhile, Ahmad-Abdáli, having effected nearly everything which he desired, after pillaging the greater part of the North-Western Provinces of India, recrossed the Indus.

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We do not propose to here follow the subsequent course of events in the Indian peninsula. Suffice it to say that the invasions of Ahmad-Abdáli were the last of the series of inroads to which India has been from time to time subjected by *land*. The Empire, founded by the great house of Timur, shaken by ceaseless internal disorders, and especially by the brilliantly executed inroads of the Mahrattas, whereby it was deprived of its best provinces, really received its death-blow at the hands of the famous Nádir-Sháh. But the four invasions of Ahmad-Sháh-Abdáli, between 1747-59, completed the work of disruption by destroying all personal or deputed authority of the Emperor. Indeed, it may be said that the Empire, which had been raised by the genius of Bábar, and which attained to the zenith of its grandeur during the reigns of the great Akbar and of Aurangzib, fell hopelessly to pieces after the death of the weak and incapable Muhammad-Sháh.

And by its fall the representatives of those European Powers, which had obtained a foothold in the country, naturally took every advantage. Indeed, for a year before the death of Nádir-Sháh, and consequently for the two years preceding the first Afghán invasion, an historical drama had begun upon the Eastern littoral of the Indian peninsula, on the issue of which depended the fate of this, the richest country in the world. For there two great European peoples, the French and the English, the lords of Oceans and of Seas, were striving together for the mastery of the rich inheritance of Bábar. In 1746 the French had seized from the English the Presidency of Madras, and, to all appearance, it then might with some confidence have been foretold that the result of the struggle would be on the side of the French. But destiny otherwise decreed. The English, with deep discernment, perceived that upon the possession of India would depend their very well-being and power as a nation; and so they did everything they could to entangle France in contests upon the Continent of Europe, so as to divert her attention altogether from the direction of India.

And so in the course of a period of one hundred and fifty years, by paralysing all efforts at interference on the part of European Powers in Indian affairs, England has consolidated her possession of that vast and richly endowed peninsula, peopled by 200 millions of inhabitants, who, by their industry, had attained to a high state of civilisation in the course of many thousands of years.

On the other hand, it must be admitted that the advantages which India has derived whilst in the hands of an active and busy race are not inconsiderable. And the practically-minded English race is quite aware of this, for it has used every endeavour to jealously guard the safety of this priceless acquisition, which has been justly called "the brightest jewel of the British Crown."

L. N. Soboleff.

NAVAL NOTES.

HOME.—The following are the principal appointments which have been made: Vice-Admirals—Sir A. L. Douglas, K.C.B., to be Commander-in-Chief at Portsmouth; D. H. Bosanquet to be Commander-in-Chief in North America and the West Indies. Captains—A. G. H. W. Moore to "Ariadne"; J. E. Bearcroft, C.B., M.V.O., to be Assistant to Admiral Commanding Reserves; G. Le C. Egerton, C.B., to "Duncan"; H. B. Jackson, F.R.S., to "Vernon"; C. R. Keppel, C.B., D.S.O., to "Implacable"; T. P. Walker to "Formidable." Commander—A. R. Hulbert to "Proserpine."

Vice-Admiral Sir A. L. Douglas, K.C.B., is, according to present arrangements, to relieve Admiral Sir J. Fisher, G.C.B., at Portsmouth, on the 20th October, when the latter officer will take up his appointment as First Sea Lord, in succession to Admiral of the Fleet Lord Walter Kerr, G.C.B. The following officers have also been selected for employment:—Rear-Admirals—H. T. Grenfell, C.M.G., to be Second-in-Command of the Mediterranean Fleet, vice Rear-Admiral R. N. Custance, C.V.O., C.M.G.; the Hon. H. Lambton, C.V.O., C.B., to Command of Cruiser Division of Mediterranean Fleet, vice Rear-Admiral Sir B. W. Walker, Bart., C.V.O., C.M.G.; E. S. Poë, C.V.O., to Command of Cruiser Squadron, vice Rear-Admiral Sir W. H. Fawkes, K.C.V.O. Captain A. M. Field has also been selected to succeed Rear-Admiral Sir W. J. L. Wharton, K.C.B., as Hydrographer to the Navy.

The first-class battle-ship "Albion" paid off at Wei-hai-wei on the 26th ult., and recommissioned for a further term of service as flag-ship of the Rear-Admiral Second-in-Command in China on the following day. The first-class battle-ship "Implacable" arrived at Plymouth on the 31st ult. from the Mediterranean; she paid off on the 8th inst at Devonport, and recommissioned the following day for a further term of service in the Mediterranean; on her arrival at Gibraltar, the first-class battle-ship "Formidable" will leave for Portsmouth, where she will pay off, recommission, and proceed back to the Mediterranean; both ships will have their principal defects made good at Malta.

The second-class cruiser "Naïad," from the Mediterranean, paid off on the 2nd ult. at Portsmouth; the second-class cruiser "Hermione" arrived at Plymouth on the 5th ult. from the Mediterranean, and will pay off at Devonport; the second-class cruiser "Retribution" arrived at Plymouth on the 12th ult. from the West Indies, and will pay off at Chatham; the second-class cruiser "Talbot," from China, paid off on the 12th ult. at Devonport. The third-class cruiser "Pomone," from the East Indies, paid off on the 23rd ult. at Chatham, and her crew turned over to the "Proserpine," a sister-ship, which commissioned at Chatham on the following day for the same station. All the ships specially commissioned for the manœuvres have been paid off.

Launch.—On the 27th ult. the "Forward," the first of the new scouts, was launched from the Fairfield Shipbuilding Yard, Govan, on the Clyde. Her dimensions are as follows:—Length, 384 feet; beam, 39 feet 2 inches; displacement, 2,945 tons; the engines are to develop 16,500-I.H.P., giving a speed of 25 knots, with a bunker capacity of 500 tons. The armament will consist of ten 12-pounder Q.F. guns, eight 3-pounder Q.F. guns, and two 18-inch deck torpedo-tubes.

The Loss of the "Sparrowhawk."—Details have now come to hand regarding the loss of the destroyer "Sparrowhawk" on the China station, which struck, on the night of Friday, the 17th June, a rock, unmarked on the chart, north-east of Chesney Island, one of the Parker group. The chart showed eight fathoms of water. After hard work she was re-floated and brought alongside the flag-ship "Glory"; all her guns, torpedoes, ammunition, and loose gear were saved, but shortly after being brought alongside the flag-ship she sank in eight fathoms. She had struck a pinnacle rock, which pierced her hull just abaft the third funnel, and it is supposed the engine-room bulkhead broke after she had been towed off, which caused her to part between the second and third funnels.

The Torpedo Manœuvres.—The torpedo manœuvres, which began at 8 a.m. on the 8th ult., concluded on the morning of the 15th ult. There was one serious mishap, viz., the sinking of the destroyer "Decoy," belonging to the Blue Flotilla, by the "Arun," another vessel of the same flotilla, which was attended, fortunately, by no loss of life, although two of the "Decoy's" crew were rather seriously injured. The official object of the operations was thus defined:—To ascertain as far as possible the extent of the danger which threatens a fleet compelled by strategic exigencies to move within the radius of action of strong hostile torpedo craft flotillas, but having the advantage of a superiority of force over the enemy in battle-ships and cruisers, and the support of equally strong torpedo craft flotillas of its own.

The fleet in question (the Blue) was composed of four battle-ships: the "Royal Sovereign," "Hannibal," "Howe," and "Barfleur," with the second-class cruisers "Æolus" and "Melampus"; it was supported by flotillas of destroyers operating from Queenstown, Waterford, and Carrickfergus. Vice-Admiral Sir A. K. Wilson, K.C.B., was in supreme command on the Blue side.

Rear-Admiral C. G. Robinson, with his flag on the second-class cruiser "Highflyer," was in command on the Red side, his head-quarters being at Milford Haven. The force under his orders was made up of torpedo-gunboats, destroyers, and torpedo-boats, the different flotillas being stationed at Milford Haven, Falmouth, and Loch Ryan, in the north.

On the morning of Monday, the 8th, the Blue Fleet was sighted by the Red signal stations in Cornwall at 8 a.m.—the hour when hostilities commenced. At the same time a flotilla of Blue gun-boats and destroyers left Queenstown and formed a line across the mouth of the Bristol Channel; the Blue Fleet came into touch with them early in the afternoon, and, screened by this protecting flotilla, was off Milford Haven about 4 p.m., when it altered course for Carnsore Point, where it picked up the Blue flotilla of destroyers from Waterford, which convoyed it through the St. George's Channel, the fleet arriving at Carrickfergus in Belfast Lough on Tuesday at mid-day. On Tuesday afternoon the Blue flotilla from Carrickfergus was sent out to clear the way and mask the Red flotilla at Loch Ryan; this it succeeded in doing, and the fleet, weighing from Carrickfergus late on Tuesday night, passed through the North Channel safely,

arriving at its destination (Lough Swilly) on Wednesday morning; the object in view was thus attained, the Blue torpedo craft having successfully defended their fleet in its passage through the waters threatened by the hostile flotillas. The Blue Fleet was equally successful in returning south; but on the last day of the manœuvres, when off Falmouth, one of its cruisers, the "Æolus," was torpedoed by the "Derwent," one of the Red destroyers, which seems to have been a very creditable achievement, as it was done in a fierce gale, and with a heavy sea running. The net result of the week's exercises, therefore, was that the Blue fleet twice passed in safety, under the protection of its three strong flotillas, through the Irish Sea, the enemy's flotillas of gun-boats and torpedo-boats at Milford Haven and Loch Ryan, only losing one cruiser. From the first, the commander of the Blue flotillas boldly took the offensive, blockading and attacking the vessels on the Red side; in this work he apparently lost the greater part of one of his three flotillas and about a third part of another; but he fully succeeded in carrying through the task assigned to him. The losses on the Red side during the various engagements were also considerable, and the Report of the Umpires on the whole manœuvres will be looked for with much interest.

It is, we believe, admitted that one result of the manœuvres has been to show the capacity of destroyers for protecting a fleet from the attack of torpedo-boats. It is also satisfactory to learn that the new destroyers of the "River" class, which have met with so much hostile criticism, proved to be excellent sea boats, and came much better through the bad weather experienced than the older vessels.

It seems that on the night of the 13th ult., when the collision occurred between the "Arun" and "Decoy," which proved fatal to the latter, the night was very dark, and it was blowing fairly hard. The "Arun," "Sturgeon," and "Decoy" were proceeding in line ahead, without lights, when the "Arun," without signal, altered course some 16 points, unperceived by the "Decoy," which vessel was struck amidships. As the "Decoy" kept afloat for about half an hour, time was thus fortunately given for the rescue of all the crew.—*Résumé from Times.*

FRANCE.—The following are the principal appointments which have been made: Capitaines de Vaisseau—A. Somborn to "Condé"; M. J. Baudry-Lacantinerie to be Director of Submarine Defences at Lorient; A. A. Hallez to be Director of Submarine Defences at Cherbourg. Capitaines de Frégate—J. A. Habert to "Galilée"; C. De Marliave to "Lance" and *Défense-Mobile* at Lorient; J. M. D. Lemaine to "Phlégéton"; J. F. Amet to "Descartes"; H. V. Barbin to "Meurthe." —*Journal Officiel de la République française.*

M. Lockroy on the Command of the Sea and the Value of Torpedo Flotillas.—In a recent number of the *Eclair* there appeared from the pen of M. E. Lockroy an interesting article on some of the lessons of the present war. M. Lockroy was at one time Minister of Marine, and is a well-known writer on naval matters, and a strong advocate of the *guerre de course* and of torpedo-boats as a weapon of both offence and defence.

M. Lockroy points out that the first lesson to be drawn from the present war in the East is the absolute necessity of being always ready for war; first, because the best method to avoid war is to be prepared for it;

secondly, because war may be forced on a nation without it being able to prevent it. He expresses his profound belief that had Russia been better prepared for war in Manchuria than she proved to be, the present disastrous struggle might have been avoided.

"The second lesson," in the writer's opinion, "is the ever-increasing importance of the rôle which fleets have to play in modern wars. It is on the water at this moment that the fate of the two adversaries is being decided. All the successes of Japan are due to the fact that she holds the command of the sea, which has enabled her from the opening hours of the war to paralyse her enemy's fleet. The first night attack struck that fleet a blow from which it has never recovered itself. But if a proper system of naval defence had been organised at Port Arthur, if a line of submarines had protected the coast, and if a line of submersibles had kept watch in the offing, no disembarkation of troops on the part of the Japanese would have been possible without heavy losses, and complete disaster even might have resulted. And if the latest desperate sortie of the Russian fleet had resulted in victory and the annihilation of the Japanese fleet, the same fate must have overtaken the armies of the Mikado. The battles already won would have availed nothing. The march on Liao-Yang and Mukden must have been given up; the army must have fallen back, and probably would have to capitulate, as it would be cut off from its base of operations, separated by the sea from its own country, and isolated on a continent from which it can draw no supplies of any kind. Thus we can say that at this moment the man who is playing the principal *rôle* in this war, the only real victor, is neither Kuroki, nor Nodzu, nor Oku, but is Admiral Togo.

"It is in Togo's hands that lie the fortunes of Japan, and it is upon him that the duty of defending them still lies, for he may yet have to defend them against the Baltic Fleet. But can that fleet ever reach the Far East? It could have done so in the days of sails, when the motive power was a natural and inexhaustible force. To-day all is changed. Coal in the bunkers is a necessity; it is rapidly used up, and in order to replenish, one ought to find on the route those fortified coal depôts which one calls *points d'appui*. Russia does not possess a single one, and the ports of the neutral Powers will be closed to her. Can her ships coal at sea? With the actual means available one may say that it is impossible. Coaling can only be done in sheltered roadsteads or in smooth water. What deserted and unwatched roadsteads will the Russians find *en route*?

"But does this preponderating *rôle* of the Navy in the present war result solely from the special geographical position of Japan and Corea? To think so will be an error. This *rôle* will be equally important in European wars, and equally productive of results. All the naval and military writers in England and Germany are occupying their minds with the question, which they consider one of the first importance, even if war broke out between two Continental Powers. With the command of the sea is bound up the power of retaining colonies, whose stores of ammunition, money, and other necessaries can only be replenished by means of the sea. With the national armies embracing every branch—agriculture, manufactures, and commerce—the work of the nation finds itself brought to a standstill in case of a struggle, and it is beyond the ocean, as we were able to do in 1870, as the result of our command of the sea, that it is necessary to seek the means not only of prolonging the struggle, but even of providing for national existence. How is this to be done if we have not a powerful fleet, and if that fleet

is not in a condition to enforce respect from rival fleets and oppose an adequate force to our enemies? On this theme, Von der Goltz and his emulators have written a library, and it is to the brilliant polemic they have inaugurated and sustained that the creation of the German Navy is due.

"If the Russo-Japanese war has every day revealed that importance of the Navy, upon which specialists have for so long been insisting, but of which the public has had no notion, it has also shown, at the same time, how decisive has become the *rôle* of torpedo-boat flotillas, and how terrible a weapon the torpedo is, although for so long a time it was despised. Up to the last battle, when the two squadrons met at sea and fought it out with their guns, it is the torpedo which alone has struck the deadly blows.[1] Even in this last battle the torpedo flotilla played an important part. Although it was broad daylight when the fighting commenced, the Japanese torpedo-boats were so persistent in their attacks that the Russian commanders have admitted that they were very seriously hampered by them in their manœuvres. To the number of some thirty, they rushed on the large ships of the enemy, which were doubtless taken aback by the repeated attacks of this swarm of mosquitoes. I shall be much astonished if, if the truth were known, some of these vessels too were not sunk. But what does the loss of men count or the loss of two or three million francs if you can inflict on the enemy losses of thirty or forty millions, and with these small vessels send to the bottom the huge ships of the enemy? To-day the fact has to be admitted that a torpedo-boat flotilla is not only an incomparable weapon of defence, but also of offence. How is it that our Administration has not foreseen this result? And if it has foreseen it, why have two years been allowed to elapse without any attempt being made to strengthen our own flotillas? Many other naval problems are still obscure, and are open to discussion. It is necessary to know the full details of the late battles, to have the reports of the commanders and the opinions of the officers engaged before us, to enable us to elucidate, thanks to the late terrible trial of modern war *matériel*, those points which still require to be cleared up.

"The future of naval architecture demands that we should make a thorough investigation into, and, if possible, throw some light upon these points. But from this time one fact stands out, which was long ago predicted by the late Admiral Jurien de la Gravière, that the torpedo flotillas are destined to play an ever-increasingly important *rôle*, and that their construction and composition must exercise a decisive influence on the equilibrium of the naval forces of Europe and the entire world. Perhaps we are on the eve of some profound transformation. And it is this which makes us regret still more that our Ministry of Marine is not only neglecting the construction of torpedo vessels, but is also opposed to the laying down of submersibles."

Colonial Defence.—The Sub-Parliamentary Committee specially charged with the consideration of Colonial defence met on 26th June, under the presidency of M. Thomson, who submitted the following agenda for discussion.

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[1] As was explained in an article in the *Temps*, a *résumé* of which appeared in the French Naval Notes last month, the word *torpille* in French is applied indiscriminately to express both the auto-mobile weapon and a submarine mine.

1. To examine the programme of defence of 20th July, 1901, its origin, its defects, the modifications already made in it, and their object. What guarantees would the complete execution of this programme give as regards the defence of the colonies?
2. Is it possible to defend all our colonies, and is this even necessary, considering the different possibilities of war; which colonies, and which of the *points d'appui* call for most pressing attention?
3. To examine the actual defensive situation in Indo-China. Its maritime defences, fixed defenses on shore, garrisons and fortifications. See how these different defenses can be improved.
4. Make the same investigations for West Africa.
5. For Madagascar.
6. For the West Indies and New Caledonia.
7. For Bizerta and Algeria—Tunis.
8. Consider what measures could be taken for the immediate improvement of the defensive organisation of the colonies, and what should be the duties and spheres of action of the different ministerial departments which control colonial defence.

Submarines.—Admiral Fournier having completed his inspection of the mobile defences at Cherbourg, has issued the following memo. :—"The Vice-Admiral, Permanent Inspector-General of mobile defences and submarine stations, congratulates the seven lieutenants commanding submarines on the result of the torpedo attacks made on the "Flamme," in his presence all the torpedoes having struck the object aimed at and run perfectly straight. This reflects the greatest credit on the crews of the submarines at Cherbourg both as regards the care and adjustment of the torpedoes, the accuracy of the shots, and the precision with which the boats were manœuvred by their commanders, and shows the military value of the training received under the enlightened Capitaine de frégate Mottez."

Vice-Admiral Fournier proceeded on his tour of inspection to Brest from Cherbourg, hoisting his flag on board the aviso-torpilleur "Bombe."

Vice-Admiral Fournier has given the following evidence on the submarine question before the Extra-Parliamentary Committee on the Navy:

"As regards the submersible type, the torpedo attacks made in his presence were completely successful. In their voyage from Cherbourg to Brest these boats encountered a heavy sea, behaving as well as torpedo-boats; these results induced him to recommend the construction of more submersible boats. In comparing them with submarines proper, he considered the latter to be more useful for defensive purposes in the case of bombardment or blockade by an enemy. If the Russians had had submarines, the Japanese operations at Port Arthur would have been almost impossible. The electrically propelled submarine is silent and invisible, and no defence against its attack has up to the present been devised; its radius of action is, however, limited, and its habitability bad, as on account of the small freeboard, even when not immersed, it is obliged to navigate closed up, necessitating a great strain on the crew.

'Also should it be necessary to send one of these boats some distance it would have to be towed, and it is found that the movements and violent and peculiar motion in this case is such that no one can resist sea-sickness.

"I am not," continued the admiral, "as has been stated, in favour of submarines against submersibles, I favour both types, as each has its advantages, the submarine being useful for defending a roadstead, and acting at short distance from the coast.

"The submersible is, so to speak, a double vessel, which can navigate on the surface like a torpedo-boat, when its crew, being in the open air, give it a direct superiority, as regards habitability, enabling it to carry on operations at a considerable distance. If we had a sufficient number of submersibles, by a careful disposition of them we should be able to cut all the great maritime routes, and also most efficiently protect the coasts of France and our colonies.

"The length of time which it takes a submersible to make a dive has been over-stated. I have found by several trials that the time is not more than 5 minutes, which is also the estimated time for the large submarines now projected.

"Answering a question by M. Jaurès, the admiral replied that in war time, every submersible should be accompanied by a destroyer. He did not consider it to be advisable to limit naval construction to this type of vessel alone, a change might be made in ocean routes, and the radius of action of submersibles is limited, and it will always be necessary to build large ships; in his opinion, the large war-ship of the future will be something between an armoured cruiser and a battle-ship with a very great radius of action.

"Asked by M. Vazeille whether M. Pelletan had consulted him about stopping the construction of submersibles, the admiral replied that he had not been consulted, and that after each of his inspections he had reported in favour of constructing more submersibles, and had received no reply. As regards the *personnel* of the fleet, when the new naval programme is complete there will be a deficiency in numbers, not in the ordinary seamen class, of which as many can be obtained as required, but among specially trained men."

The Extra-Parliamentary Committee of the Navy has appointed two sub-committees, one for consideration of the fleet in commission and crews, and the second of ships under construction, the dockyards, and the naval programme.—The *Eclair* and the *Temps*.

GERMANY.—*The Naval Manœuvres.*—In accordance with an Imperial Order, the fleet which is now engaged in the annual manœuvres, consists of the Active Battle Fleet, to which have been added the new first-class battle-ship "Schwaben," the new first-class armoured cruiser "Prinz Adalbert," the third-class cruisers "Nymphe" and "Hamburg," the torpedo depôt-ship "Pelikan," the gunnery training-ships "Olga" and "Carola," with two torpedo-boats for despatch service.

The ships of the Active Battle Fleet were all docked last month in preparation for the manœuvres, and the whole fleet assembled in Kiel harbour during the latter part of the month, and according to programme, left on the 29th ult., for Lübeck Bay; tactical exercises were

carried out between the 29th ult. and the evening of the 1st inst., the fleet returning to Kiel, where, on the 2nd and 3rd inst., they completed with coal. On the 4th, the embarkation of an expeditionary force took place, which was disembarked at Altona on the 5th, in presence of the Kaiser, the fleet then proceeding through the Kaiser Wilhelm Canal, and anchoring off Brunsbüttel, where it was to be inspected on the 7th inst. by the Kaiser. At Brunsbüttel, an expeditionary force was again to be embarked, the fleet proceeding to Heligoland on the 6th, the Kaiser accompanying it on board the "Kaiser Wilhelm II." On the 8th and 9th inst., tactical exercises were to take place in the North Sea, under the personal command of the Kaiser, who will deliver his criticism on the result of the exercises on the 10th, on which date the fleet were to proceed through the Kaiser Wilhelm Canal again to Lübeck Bay, there to take part in the Army manœuvres before the Kaiser on the 13th, 14th, and 15th inst., 3,000 men being disembarked from the fleet for the purpose.

The Active Battle Fleet is constituted as follows:—

First Squadron. First Division.
First-class battle-ships.—"Kaiser Wilhelm II." (flag-ship of Admiral von Koester, Commander-in-Chief), "Kaiser Friedrich III.," "Kaiser Wilhelm der Grosse," "Kaiser Karl der Grosse."

Second Division.
First-class battle-ships.—"Wittelsbach" (flag-ship of Rear-Admiral Breusing), "Wettin," "Zähringen," "Mecklenburg."

Second Squadron.
Coast-defence battle-ships.—"Hildebrand" (flag-ship of Vice-Admiral Fritze, commanding squadron), "Beowulf," "Frithjof," "Odin."

Cruiser Division.
First-class armoured cruisers.—"Prinz Heinrich" (flag-ship of Rear-Admiral Schmidt), "Friedrich Carl."
Third-class cruisers. — "Amazone," "Ariadne," "Medusa," "Frauenlob," "Arcona," "Niobe."
Despatch-vessels.—"Blitz," "Pfeil."

Torpedo-boat Flotilla. I.
Division-boat S114, flying senior officer's pennant.

A (VI.) Torpedo-boat Division.
Division-boat S119, with Nos. 115, 116, 117, 118.

B (I.) Torpedo-boat Division.
Division-boat S101, with Nos. 96, 98, 99, 100.

Torpedo-boat Flotilla. II.
Division-boat G112, flying senior officer's pennant.

C (V.) Torpedo-boat Division.
Division-boat G108, with Nos. 109, 110, 111, 113.

D (IV.) Torpedo-boat Division.
Division-boat S106, with Nos. 102, 103, 104, 105.

The new first-class battle-ship "Schwaben," which has been temporarily attached to the Active Fleet during the manœuvres, was recently commissioned as the torpedo experimental ship, taking the place of the "Neptun," which was the original

"Friedrich Carl." The "Friedrich Carl" was the first battle-ship owned by the German Navy, and was built by the La Seyne Company, Toulon, being launched in January, 1867. She was first commissioned in the autumn of 1871, and, flying the broad pennant of Commodore Werner, was flag-ship of a small squadron sent to cruise in the West Indies. Ordered to the Mediterranean in the summer of 1873, on the outbreak of the civil war between the Central Republican Government and the Intransigente Junta in the South, Commodore Werner and the "Friedrich Carl" suddenly came prominently into public notice by the commodore's seizure of the armoured frigate "Vittoria" and the frigate "Almanza," which, coming out of Cartagena flying the flag of the Intransigente Government, began molesting foreign shipping. Doubtful, however, how far his action might meet with the approval of the German Government, the commodore promptly handed the two ships over to the English battle-ship "Swiftsure," Captain the Hon. W. J. Ward, who escorted them to Gibraltar, where they were retained until the fall of the insurgent Government in the following January. Prince Bismarck disavowed Commodore Werner's action, who was recalled and not again employed. The "Friedrich Carl" has been obsolete many years, and is now definitely struck off the strength of the fleet.

The Foreign Squadrons, 1904 :—

The Cruiser Squadron, which for some years has been practically stationed in Chinese waters, is, according to this year's Estimates, constituted as follows :—

First-class armoured cruiser.—"Fürst Bismarck" (flag-ship of Vice-Admiral von Prittwitz u. Gaffron, Commander-in-Chief).
Second-class cruisers. — "Hansa" (flag-ship of Rear-Admiral von Holtzendorff), "Hertha."
Third-class cruisers.—"Thetis," "Geier."

Temporarily attached to squadron :—
First-class gun-boats.—"Iltis," "Jaguar," "Tiger," "Luchs."
River gun-boats.—"Tsingtau," "Vaterland," "Vorwärts."
Destroyers.—"Taku," "S90."

Cruiser Division (South and Central American Station).

Second-class cruiser.—"Vineta" (flag-ship of Commodore Schröder, commanding division).
Third-class cruisers.—"Gazelle," "Falke."
First-class gun-boat.—"Panther."

Australian Station.

Third-class cruisers.—"Seeadler," "Condor."
Surveying-ship.—"Möwe."

East African Station.

Third-class cruisers.—"Bussard," "Sperber."

West Coast of Africa.

First-class gun-boat.—"Habicht."
Surveying-ship.—"Wolf."

Constantinople (Stationaire).

Special service vessel.—"Loreley."

Cost of the Fleet.—The cost of the Fleet in commission is distributed as follows:—

	1904. Marks.	£ s.	1903. £ s.
1. The Battle Fleet.			
Active Squadron	7,190,874	= (359,543 14)	244,008 10
Reserve ,, ...	351,132	(17,556 12)	76,922 14
Scouting ,, ...	3,384,804	(169,240 4)	148,525 2
Torpedo Flotillas...	1,814,054	(90,702 14)	79,562 3
Total	12,740,864	(637,043 4)	549,018 9
Showing an increase of 1,760,495 marks (£88,024 15s.) as compared with last year.			
2. Ships on Foreign Stations.			
The China Station	5,013,144	(250,657 4)	265,632 8
The Australian Station	499,512	(24,975 12)	33,505 10
The West African ,, ...	316,584	(15,829 4)	19,156 10
The East African ,, ...	495,564	(24,778 4)	25,060 4
The American ,, ...	1,686,792	(84,339 12)	70,651 16
Constantinople Stationaire	74,532	(3,726 12)	3,860 8
Surveying Duties...	155,748	(7,787 8)	7,311 12
Total	8,241,876	(412,093 16)	425,178 8
Showing a decrease of 261,692 marks (£13,084 12s.) as compared with last year.			
3. Training Ships.			
Cadets' and Boys' Training Ships	1,075,536	(53,776 16)	54,675 12
Gunnery School Ships	1,312,800	(65,640 0)	69,724 15
Torpedo School Ships	754,721	(37,736 1)	37,504 10
Submarine Mining	24,342	(1,217 12)	1,136 2
Coast Pilotage	38,154	(1,907 14)	2,743 12
Total	3,205,553	(160,277 13)	165,784 11
Showing a decrease of 110,138 marks (£5,506 18s.) over last year.			
4. Special Service Ships.			
Imperial Yacht "Hohenzollern"	385,116	(19,255 16)	15,404 8
Surveying Ships (Home waters)	33,990	(1,699 10)	2,057 18
Torpedo Experimental Ship	612,048	(30,602 8)	32,208 12
General Experiments	192,888	(9,644 8)	10,260 12
Fishery Protection	198,744	(9,937 4)	10,973 10
Total	1,422,786	(71,139 6)	70,905 0
Showing an increase of 4,686 marks (£234 6s.) over last year.			
5. For Special Purposes	554,643	(27,732 3)	19,293 17
COMBINED TOTAL.			
Battle Fleet	12,740,864	(637,043 4)	549,018 9
Foreign Service	8,241,876	(412,093 16)	425,178 8
Training Ships	3,205,553	(160,277 13)	165,784 11
Special Service Ships	1,422,786	(71,139 6)	70,905 0
Special Purposes	554,643	(27,732 3)	19,293 17
Total	26,165,722	(1,308,286 2)	1,230,180 5

Showing an increase of 1,562,117 marks (£78,105 17s.) over last year.—*Etat für die Verwaltung der Kaiserlichen Marine, 1904.*

UNITED STATES.—*Speed Trial of the Battle-ship "Ohio."*—The new first-class battle-ship "Ohio," built by the Union Iron Works of San Francisco, made her speed trial at Santa Barbara, California, on Saturday, the 30th of July. Her actual record fell slightly below the requirements of an 18-knot speed, but it is thought probable that when allowances have been made for the tide it will be found that she made fully 18 knots, and maybe a trifle more. The course lay from the Santa Barbara Lighthouse to a stake-boat 36 miles up the coast, and return. On the first leg of the course the "Ohio" fully met requirements, rounding the stake-boat with half a minute in her favour; but on the return, both wind and tide were against her, and she lost a minute and a half.

The battle-ship "Ohio" is one of the three powerful battle-ships of the "Maine" class, authorised by Congress on 4th May, 1898. Although she was the first of her class to be launched (in May, 1901), she fell behind her sister ships, the "Maine" and the "Missouri," which are both in commission, the former since December, 1902. The contract date of completion of the "Ohio" was originally set for 5th June, 1901, so that she is over three years behind.

The addition of the "Ohio" to our Navy will greatly strengthen our position in the Pacific, for she belongs to the most powerful class of battle-ships we possess. It will be recalled that it was at first proposed to build these vessels on plans very similar to the "Alabama" class of battle-ships, which have a speed of about 16 knots per hour, or at least two knots below the average speed of foreign battle-ships. Owing to the storm of protest aroused by this proposition, it was decided to increase the speed of these vessels to 18 knots. Increased speed required the addition of 20 feet amidships to allow for the increased motive power necessary. This also made room for two more 6-inch guns in the broadside battery, and a larger coal capacity.

The dimensions of the "Ohio" are as follows:—Length, 388 feet, and beam 72 feet 3 inches, with a draught of 25 feet 6 inches. Her displacement, when fully equipped for service and carrying her normal supply of 1,000 tons of coal, will be 12,500 tons, and her full load displacement will be 13,941 tons. The normal displacement of the "Maine" is 12,300 tons, and of the "Missouri" 12,240 tons. The "Ohio," like the "Missouri," is equipped with Thornycroft boilers and twin-screw vertical triple-expansion engines. The "Maine," it will be recalled, is fitted with Niclausse boilers. The main armament of the "Ohio" consists of four 12-inch guns and sixteen 6-inch guns, and she is equipped with two submerged torpedo tubes.

Protection is afforded by a water-line belt of Krupp steel, 11 inches thick at the top, and 7½ inches at the bottom. The turrets containing the 12-inch guns have a thickness of 12 inches, and the 6-inch guns are protected by 8-inch armour. The protective deck is covered with 3-inch plate forward and 4-inch plate aft. All the joinery work above the protective deck is of fire-proof wood, and, whenever possible, light metal is used for gangways, bridges, and the like, so as to make the vessel thoroughly fireproof. The "Ohio" will have a complement of 699 officers and men.—*Scientific American.*

MILITARY NOTES.

PRINCIPAL APPOINTMENTS AND PROMOTIONS FOR AUGUST, 1904.

Lieut.-Generals—Lieut.-General B. L. Forster to be Colonel-Commandant, Royal Artillery. Colonels—Colonel G. E. Beckett, C.B., from h.p., to be Colonel on the Staff and Chief Staff Officer, Malta; Colonel (temporary Brigadier-General) the Hon. A. H. Henniker-Major, C.B., is transferred from the IVth to the IIIrd Army Corps, as C.S.O. (Brigadier-General on the Staff), retaining the temporary rank of Brigadier-General whilst so employed. The undermentioned Second Class District Commanders are granted the rank of Major-General in the Army:—Colonel (temporary Brigadier-General) A. A. Pearson, Colonel (temporary Brigadier-General) H. M. Mason. Lieut.-Colonel and Brevet Colonel G. P. Owen, from h.p., to be a Colonel on the Staff for Royal Artillery, with the substantive rank of Colonel in the Army. Colonel G. M. Bullock, C.B., from C.S.O., Egypt, to be a Colonel on the Staff to Command the Garrison of Alexandria, with the local rank of Brigadier-General whilst so employed. Colonel G. Barker, from a Colonel on the Staff for Royal Engineers, to be Inspector of Royal Engineers. Lieut.-Colonel and Brevet Colonel A. N. Rochfort, C.B., from h.p., to be Inspector of Royal Horse and Royal Field Artillery, and is granted the substantive rank of Colonel in the Army. Brevet Colonel R. L. Hippisley, C.B., from Lieut.-Colonel h.p., to be a Colonel on the Staff for Royal Engineers, and is granted the substantive rank of Colonel in the Army.

HOME.—*Army Organisation.*—A Parliamentary Paper was issued on the 4th August, in which the Secretary of State for War gives particulars of the Army Organisation Scheme under various heads. The "scheme of establishments of Infantry and Guards" is similar to that in the Army Estimates, so also is the "Distribution at Home and Abroad." The following is the constitution, approximately estimated, of a unit of each Establishment proposed, showing the number of men serving in each year of their service (non-commissioned officers and men) :—

Years of Service.	General Service Battalion.			Home Service Battalion.
	India.	Colonies.	Home.	
1st	—	21*a*	35*b*	184*c*
2nd	119	83	66	216*d*
3rd	142	109	86	3
4th	134	106	81	2
5th	126	102	78	2
6th	119	98	77	2
7th	113	95	75	2
8th	107	92	73	2
9th	101	89	71	2
10th to 12th	26	20	13	38
13th and upwards	14	13	82	45
Total	1,001	828	737*e*	498*f*

a. Including 3 under 20 years of age.

b. Including 9 under 20 years of age.

c. All under 20 years of age.

d. Including 108 under 20.

e. Eight of the general service battalions at home will have an establishment of 869 non-commissioned officers and men.

f. Including 292 under 20.

The average service of the Indian drafts is taken as twelve months, and of the Colonial drafts nine months. On this basis, the draft required for a battalion in India is calculated to be 149 men, and that for a battalion in the colonies 114 men.

Number of Reservists Produced.

The total 1st Class Reserve produced would be :—

Infantry of the Line.

General service Reservists, with between nine and twelve years' service	20,300
Home service Reservists, with between two and eight years' service	63,600
Total, Infantry of the Line	83,900

Foot Guards.

Reservists with between three and twelve years' service	6,100
Total, Guards and Line	90,000

The 2nd Class Reserve, corresponding to Section D, has been disregarded.

The individual men in the General Service Reserve cannot be allocated to the Indian, Colonial, and Home cadres separately, as each man will probably have served in more than one of them. But, dividing the Reserve, *pro rata*, in proportion to establishments, we have this result :—

——	Number of General Service Battalions.	Total Establishment, Non-Commissioned Officers and Men.	Reserve.	
			Total.	Per Battalion.
India	52	52,076	11,270	217
Colonies	26	21,528	4,660	179
Home	26	20,218	4,370	168
	104	93,822	20,300	Average 195

Recruits.

Total yearly number of recruits of 19 years of age and upwards to keep up establishment of 104 general service battalions, including 26 at home :—

Number of recruits by direct enlistment	12,000
Transfers obtained from home service battalions on the assumption that 20 per cent. of the men who complete two years' colour service will join the general service battalions	2,900
Total annual contingent for general service	14,900
Total yearly number of recruits of 18 years required for 71 home service battalions	19,600

Conditions on which Men are to Extend their Service for Pension.

Non-commissioned officers of the general service battalions will be allowed, as at present, to re-engage to complete 21 years' service, and so qualify for pension. Furthermore, the non-commissioned officers of the home service battalions will in the main be drawn from the general service battalions, who will also supply the non-commissioned officers composing the permanent staff of the Auxiliary Forces. Such non-commissioned officers will be allowed to re-engage to complete 21 years' service. The balance of non-commissioned officers for the home service battalions will be drawn from men of the home service battalions, who will be allowed to extend to nine years with the colours, remaining in the home service battalions, and who may further, under certain conditions, be allowed to re-engage for pension.

Financial Effect of the Proposals.

The Secretary of State for War at the same time presented to Parliament the following statement, showing the financial effect of certain reductions in and additions to the Army proposed by him :—

—	Amount of reduction.	Amount of increase.
	£	£
1. Abolition of the Royal Garrison Regiment of Infantry (five battalions and depôt)	530,000	—
2. Abolition of 14 battalions of Infantry of the Line (at Home), at 881 all ranks, and their depôts ...	810,000	—
3. Conversion of six Line battalions now abroad, at 1,012 all ranks, and of 20 battalions now at Home, at 881 all ranks, into General service battalions at Home, at average strength of 809 all ranks	98,000	—
4. Reduction of 26 Line battalions remaining in the Colonies and Egypt from average of 988 all ranks to average of 863	175,000	—
5. Conversion of 38 Line battalions, at 881 all ranks, into Home service battalions, at 520 all ranks...	860,000	—
6. Formation of 33 other Home service battalions, at 520 all ranks	—	1,077,000
7. Depôts—Infantry of the Line, to feed 175 battalions, namely, 123 as above and 52 in India:—		
Recruits (£782,000) and Depôt Staff (£366,000)	£ 1,148,000	
Deduct cost of depôts under present system other than those included under items 1 and 2	520,000	
	—	628,000
8. Withdrawal from Colonies to Home of about 4,500 Artillery and other arms, proportional to the 11 battalions to be brought away under items 1 and 3	80,000	—
9. Foot Guards:—		
Alteration of pay, messing allowance, and kit allowance, calculated on present establishment...	£ 2,000	
825 additional officers and men ...	52,000	
Increased number of Army Reservists (600) and training charges ...	15,000	
	—	69,000
10. Cavalry of the Line:—		
New organisation, with addition of 566 all ranks	102,000	
Reduction in normal strength of Reserve	19,000	
	—	83,000
11. Royal Horse and Field Artillery:—		
New organisation, etc....	14,000	
Army Reserve—reduction in numbers, reduction of pay from 6d. to 4d. a day for Home service Reservists; and increased charge for periodical training	10,000	
	—	4,000
12. Changes affecting Volunteer Force—net reduction	300,000	—
13. Reduction in expenditure on aquatic and submarine services	100,000	—
	2,953,000	1,861,000
NET REDUCTION IN EFFECTIVE CHARGES (for pensions, see below)	1,092,000	
Or, if 33 Militia battalions be absorbed into the 33 Home service battalions referred to in item 6	1,471,000	

It is important to bear in mind that the figures in this statement do not represent the saving as compared with the Estimates for 1904-05, which in many important features do not provide for the full normal cost of the present system, the charges not fully accruing in the current year. The Army Reserve is a case in point. The statement shows only the difference in charge between the present and proposed systems when in full operation. As regards infantry, the estimate is based on the organisation set forth in Parliamentary Paper, No. Cd. [1910].

The charge for the Army Reserve of Infantry of the Line under the proposed system, after providing for the periodical training of the short service men, and allowing for the reduction of their Reserve pay to 4d. a day, will be practically the same as the estimated charge for the Reserve produced by the present system.

The Militia now costs £1,818,000 per annum. If 33 Militia battalions, costing £379,000, be converted into home-service battalions, there will remain, as the annual cost of the Militia, £1,439,000.

The aggregate pension charge is practically identical under the two systems, after providing £52,000 for retaining fees of Reserve officers under the proposed system.

H. O. ARNOLD-FORSTER.

War Office, August 2, 1904.

AUSTRIA-HUNGARY.—*War Budget for 1904.*—The budget is divided, as in preceding years, into the ordinary budget, the extraordinary budget, and the supplementary budget for the corps of occupation in Bosnia-Herzegovinia. Its amounts are as follows :—

	Kronen
A. Ordinary Budget	285,846,529
B. Extraordinary Budget	22,210,350
C. Supplementary Budget	7,563,000
Total	315,619,879

A krone equals about 9d. in English money.

The Budget is intended to keep up the following effectives :—

—	Officers.	Officials.	Inferior Employés.	N.C.O.'s and Men.		Horses.	
				Re-engaged.	Not Re-engaged.	State.	Officers.
Ordinary Budget ...	16,405	4,415	722	14,823	269,596	59,101	10,370
Extraordinary Budget ...	5	39	—	—	4,472	1,632	—
Supplementary Budget ...	200	269	—	—	2,932	1,545	141
Totals	16,610	4,714	722	14,823	277,000	62,278	10,511

A. ORDINARY BUDGET.

The total of this budget is less by 1,555,904 kronen than that of the preceding year. The chief cause of decrease consists in the abandonment of the scheme for the organisation of the heavy field artillery (14 howitzer

batteries) and of the reorganisation of the mountain artillery, the credits for which (4,202,732 kronen), entered on the 1903 Budget, were not used and are not carried forward for 1904. The opposition on the part of the Hungarian Parliament to the increase of the contingent necessitated by these creations (2,400 men for the Trans-Leithan) compelled the Government to give them up. It should, however, be observed that the artillery *matériel* has nevertheless been ordered and made. The increases have to do with the following headings :—

1. Increase in the *personnel* for Military Legislation (74,000 kronen). This measure, which was begun in 1901, will be completely carried out this year, and paves the way for the reform of military legislation, still under contemplation.

2. Improvement in musketry instruction. This consists in the perfecting of ammunition with reduced charges (135,000 kronen); the preparation of ranges for firing under service conditions (100,000 kronen); distribution to every company of infantry of 500 supplementary cartridges (95,000 kronen).

3. Formation of a special corps of supply officers. Up to the present, these duties have been carried out by lieutenants, but the recruiting for the corps of officers becomes yearly more and more difficult. The military schools from which they are almost entirely drawn (86 per cent. of the officers appointed every year) do not now get enough candidates. Under these conditions, whilst endeavouring to improve the recruiting for the schools, the Government is also desirous of protecting the corps of combatant officers from all weakening of its effective, which is not absolutely indispensable. Thus the supply officers will in future be drawn from the non-commissioned officers, after a special course, lasting for over two years. The measure will not come into full effect until after ten years, and will represent a supplementary expenditure of 260,000 kronen.

4. Increase in the number of infantry reservists called up for a period of instruction, 386,000 kronen.

5. Operation of the second school for artillery cadets, founded at Transkirchen, in 1903, 129,000 kronen.

6. Increase in the credits for re-engaged non-commissioned officers, 100,000 kronen. The War Department is endeavouring to form an adequate corps of professional non-commissioned officers, in view of the introduction of the two years' period of service, at present under contemplation. In 1904, the number of re-engaged non-commissioned officers inscribed on the budget amounted to 14,823. A number of measures are being carried out in order to retain non-commissioned officers in the Service, viz. : They are permitted to re-engage from year to year; supplementary allowances of pay are given to them before the actual liberation of their class, and increasing with seniority; after six years' service, instead of nine, as previously laid down, they are entitled to a gratuity payable on the day they leave the Service; after ten years' service, they are entitled to civil employment. Another advantage to facilitate the access of non-commissioned officers to civil employment, after discharge, is the following: The 9th year of service confers the right to the effacement of all punishments entered on the defaulter sheet incurred during the 4th year, or the first of their re-engagement; the 10th year's obliterates all punishment incurred during the 5th year's period of service, and so on. Thus, a non-commissioned officer of 13 years' service has only the punishments incurred during his first three years' service entered in his defaulter sheet.

B. Extraordinary Budget.

It exceeds by 2,385,000 kronen that of the preceding year. One of the principal increases of credit is due to changes in the number and distribution, between the two Empires (Austrian and Hungarian) of the different military schools, in order to satisfy Magyar aspirations. The most interesting credits are: 4 millions (on account of a total of 12 millions) for the manufacture of 155,000 repeating rifles, model 1895; 200,000 kronen (4th account on a total of 1½ millions) for new fuses for shells; 380,000 kronen for cavalry telegraph *matériel;* 1,500,000 for the preparations of musketry ranges.

C. Supplementary Budget.

Has no essential changes.—***Revue Militaire.***

The Landwehr Cavalry.—The effective of the Landwehr cavalry, says the *Danzer's Armee-Zeitung,* has been sensibly increased during the present year, during which the regulations affecting changes in the organisation of the Landwehr mounted troops have been published.

Landwehr Uhlan regiments consist, in addition to the staff and the pioneer section, of 6 active and 1 depôt squadrons. The latter is merely a cadre in peace time, and expands into a squadron in war. In each active squadron of Landwehr Uhlan regiments the number of officers has been increased from 3 to 5; in each cadre depôt squadron from 1 to 4. Formerly, 2nd class captains exercised the functions of command. At present 1st class captains have been placed at the head of each squadron. Of the other officers, 3 have the rank of 2nd class captains or lieutenants, and 1 that of sub-lieutenant. In addition, a cadet officer is attached to each squadron. The number of section non-commissioned officers in each squadron has been raised from 1 to 3. The effective of the troops has also been considerably increased. Each active squadron is thus composed as follows:—5 officers and 73 men, of whom 5 are attached to the remount; 4 officers' chargers, belonging to the Government; 7 officers' chargers, their own property; and 56 horses, 20 of which belong to the remount.

Men of the first year are mounted on trained chargers, and are divided into 2 recruit sections, under the command of an officer; the men of the remount and of the 2nd year also form a remount section under an officer. The total strength of a Landwehr Uhlan regiment is 45 officers, or officials, 495 men, and 444 horses; but of this number, 414 form the fighting strength.

In the Tyrolese Mounted National Carabinier Division, which consists of the divisional staff, 2 active and 1 depôt squadrons, the effective has also been raised. The peace effective is at present fixed at 19 officers, or officials, 176 men, and 151 horses, whilst in 1894 it only consisted of 13 officers, 109 men, and 92 horses.

In the Dalmatian Mounted National Carabiniers the peace effective has been increased from 3 officers, 42 men, and 34 horses to 5 officers, 78 men, and 67 horses. Of this number, 67 men belong to the war effective.

Belgium. — *Re-armament of the Field Artillery.* — Since September 15th, 1903, the Belgian Government has been conducting tests of various types of field guns and carriages submitted in competition by various firms. These tests have been most carefully and

thoroughly carried out. All taking part in them, including the representatives of the competing firms, acknowledge that they were conducted impartially, the main desire being to determine the system best suited to the needs of the Government.

Various accidents have marked the course of the trials, which account in a measure for the length of time it has taken to complete the programme. The great secrecy that has prevailed in regard to details of the experiments has rendered it difficult to obtain precise information on the subject during their course. It is not without difficulty that we have been able to procure the following information :—

The last part of the programme had for its object the determination of the relative resistance of the several types to the fire of the enemy. The pieces were first subjected to infantry fire executed normal to the front and at close ranges from about 600 to 200 metres; then to shrapnel fire, the shrapnel containing steel bullets; and then, finally, to fire with explosive shell. The material did not suffer from the infantry fire. On the other hand, the cannoneers were hit at all ranges in spite of the shields. And what, indeed, appeared even more surprising was the fact that the cannoneers of the piece, with a rigid carriage, which had no shield to protect them, received but few more hits than the others. The steel shrapnel bullets proved infinitely more destructive to the material. All the shields were penetrated as with a punch, their fastenings, hinges, rivets, bolts, bent or torn out. A single one, thicker than the others, resisted penetration, but was completely dismantled.

It was shown, besides, although only three or four rounds of this nature were fired, that a steel bullet which happens to hit a slide or guide rail, or any other essential organ, would put the gun *hors de combat*. It was the fear of completely disabling the pieces, it seems, that prevented the commission from exposing them to a more prolonged fire. As to the fire with explosive shell, it would seem that it caused less injury than the preceding.

The rigid carriage, not having any delicate parts, came out of these trials free from damage. A useless result, however, for what is desired to-day are carriages that remain immovable when the gun is fired.

As a result of the tests two types have been chosen for final consideration. These two are those of St. Chamond and Krupp. They are based on different principles, but both possess the qualities that the Belgian artillery demands of a new gun, and especially of a new carriage. The other types have, without doubt, also shown certain qualities, but are far from equalling the two that the commission recommends to the Government for purchase for the purpose of continuing practical trials with them in the field.

Before reaching a final decision, accordingly, the Minister of War, accepting the recommendations of the commission, has asked for an appropriation to purchase some guns and carriages of these two types, which will then be put in the hands of troops. Recently the Minister of War has renewed in the Senate his request in regard to the continuation of the trials from a practical point of view. So very soon there will be turned over to the troops one battery from Krupp and one battery from St. Chamond.—*La Belgique Militaire* and *Journal of the United States Artillery.*

ITALY.—*Strength of the 1882 Class of Recruits.*—The official report published by the Minister of War on the recruiting operations of the 1882 Class has just been published.

The number of men inscribed on the rolls was 441,171; this number is 8,200 more than that of the 1881 Class, and the latter was higher by 45,000 than that of the preceding year. It will thus be seen that the number of men of the class sensibly increases every year in Italy, thus greatly facilitating recruiting operations, and allowing for the enrolment of men who are really fit and strong. Amongst the men entered on the lists, 101,804 were attached to the 1st Category; thus there were consequently 3,000 more than for the preceding class, and 9,000 more than for that of 1880. The number of men attached to the 1st Category is less than a quarter of the total number on the lists. This exceedingly weak effective results from the larger number of men put back, and from the considerable number of those drafted to the 3rd Category on account of the numerous dispensations allowed by the recruiting regulations.

The result of the recruiting operations for the 1882 Class was as follows:—

Struck off the lists	12,270
Unfit to serve	91,176
Put back	108,835
Failed to appear	33,634
Attached to 1st Category	101,804
,, ,, 3rd Category	92,952

The number of those "put back" and "unfit to serve" is more than 45 per cent. of those entered on the lists, which proves the strictness with which the selection of the men to be enrolled was carried out. The chief causes of unfitness were insufficient chest development (17 per cent.), weakness of constitution (14·84 per cent.), various diseases (4·07 per cent.). As is always the case, Sardinia furnishes the largest number of those unfit, caused by the bad feeding, and the bad hygienic conditions in which the population of that island lives. The number of illiterates amounts to 32·67 per cent. Of these, Northern Italy furnishes 18 per cent., and insular Italy 53 per cent. After all the operations the number of men actually enrolled amounted to 88,666, thus distributed:—

	Men.
Grenadiers	1,358
Infantry of the Line	47,875
Alpine Troops	5,690
Bersaglieri	6,682
Cavalry	7,021
Field Artillery	6,341
Horse Artillery	276
Coast Artillery	2,035
Fortress Artillery	1,537
Mountain Artillery	912
Artificers	138
Engineers	3,015
Artillery Transport	1,291
Engineer Transport	398
Royal Carabiniers	1,366
Medical Companies	1,030
Supply Companies	761
Supplementary Officer Cadets	468
Sergeant Cadets	472
Total	88,666

Field Artillery, 1904-05.—In the Budget for the coming fiscal year, an examination and report is made on the present situation and needs of the Italian field artillery. The report says :—If we consider as distributed all the material which is to be issued during the year 1904, the present status of field artillery in Italy will be as follows :—

Mountain batteries : All the material consists of the 70-mm. pieces, steel. Horse batteries : All the material consists of the 85-mm. pieces, steel. Field batteries : There are 99 batteries equipped with the 75-mm. pieces, steel, and 145 batteries with the 87-mm. guns of bronze, model 1880-1898.

In principle, the model of the carriage for the field gun has been adopted. At present a new type of long recoil field material is being constructed. The new model is the result of the tests that have been made. When this material is completed, it will be compared with the best model from the Krupp firm. Theoretical studies on a material for a long recoil mountain gun have led to the conclusion to construct a gun less powerful than that of the 70-mm. material, steel. Comparative tests will determine which is the best model to adopt.

On the whole, the work completed, or shortly to be completed, is as follows :—36 mountain batteries of 70-mm. guns, steel, representing an expense of 4,000,000; 120 field batteries of 75-mm. guns, steel, costing 24,000,000; or a total expenditure of 28,000,000.

Studies and experiments will be continued in order to determine in all their details the conditions to be fulfilled by a mountain gun and a field gun answering modern requirements and developments, and possessing all the improvements resulting from scientific investigation. The report states that the questions to be solved relate to long recoil carriages, shields armoured caissons, reduction of the number of guns to four per battery, in increase of the number of batteries resulting from this modification, ammunition supply for the batteries, etc.

All these transformations depend on financial resources, and as Parliament appropriated 60 millions for this purpose, there yet remains available the sum of 32 millions, since the contracts thus far made amount to 28,000,000.—*La France Militaire.*

Mexico.—*Cavalry in 1904.*—A recent number of the *Internationale Revue über die gesamten Armeen und Flotten* gives an interesting account of the Mexican Army. The following are some details given by that journal with regard to the cavalry of the Republic :—This branch of the Service at the present time consists of 14 line regiments of 4 squadrons, each with a peace effective of about 150 horses, plus 8 regimental cadres (8 squadrons) and 3 squadrons of frontier guards. On a war footing the cavalry consists of 22 regiments of 3 squadrons, to which must be added 12 regiments of mounted gendarmes, usually of 3 squadrons each.

The Mexican regiments are very well mounted on English, Hungarian, and German horses, crossed with the old Andalusian breed. The training and riding are according to the old Spanish school. The ordinary pace is a gallop; at the same time, the Mexican cavalry can trot when necessary, which other South American cavalry are absolutely incapable of doing.

The horse furniture in Mexico is very simple and well designed. The national Mexican saddle is one of the best existing, so much so that the late German cavalry general, von Rosenberg, wished to have it adopted by the Prussian cavalry. On the other hand, the Mexican cavalry has borrowed its carbine (Mauser system, Argentine model) from the Germans, as well as its sword (the latest model adopted for dragoons and hussars).

The clothing of the Mexican cavalry consists of blue cloth breeches and large boots, and a kersey of the same material for winter wear, and of white linen for the summer. Their head-dress is the shako, as in the infantry. They carry a banderole for cartridges over the left shoulder, and the carbine on the back, so attached to the belt that it can never fall off, however great the pace. The Mexican trooper has, as a rule, an excellent seat, and has his horse well in hand. The same may be said of the mounted gendarme. Gendarmerie regiments were raised by the President, General Porfirio Diaz, for the purpose of re-establishing order in the country, where anarchy and brigandage had reigned ever since the French invasion. Well drilled and well trained, the mounted gendarmes would form in war time a supplementary cavalry, capable of rendering the very greatest service.

SPAIN.—*Artillery Target Practice in Open Country.*—The military Press has for some time been greatly taken up with this question—a process of instruction much extolled in France, and especially by General Langlois. The *Memorial de Artilleria* claims for the Spanish artillery the honour of being the first to introduce this reform into practice. In June, 1898, the Madrid School of Gunnery issued the following memorandum :—

"In order that the gunnery practice of mountain artillery may be really profitable, and not engender erroneous conceptions which may later be entirely falsified by actual events, the Commission consider it necessary and *possible* that these practices should be carried out in really mountainous country. With this object it is necessary to constitute, before the commencement of the course, a Commission who will look for appropriate ground in the Sierra Guadarrama or in some other mountainous district, and will endeavour to smooth away difficulties raised by other departments of the State, municipalities or private individuals to whom these exercises may appear prejudicial."

This proposal could not be carried out in 1898 on account of the war with the United States; but nevertheless target practice of this nature was prepared for, and was carried out later in the following districts :—

In 1899 a Q.F. mountain battery in the Sierra Guadarrama, near Puerto de Malabon.

In 1900 another mountain battery in the same district, and an 8-cm. battery in the Valdemorillo district.

In 1901 a mountain battery in the Sierra Guadarrama, two field batteries at Valdemorillo, and thirteen 8-cm. and 9-cm. batteries at the provisional ranges of Pinto and Ocaña.

In 1902 three mountain batteries at Pincarbo and two field batteries at La Brujala. The same year, for the first time, exercises in the manning, equipping, and serving of batteries of position and of gunnery practice by siege artillery were carried out in the neighbourhood of Ceuta; five batteries were formed, at the emplacements they would occupy in actual war and gunnery practice was carried out with 12-cm. guns, 15-cm. howitzers and mortars, against batteries armed with out-of-date *matériel*

In 1903 a mountain battery on the northern slopes of the Sierra Guadarrama, in the neighbourhood of La Granja. In the same year the Siege Artillery Regiment carried out exercises in the manning, equipping, and serving of batteries in the Segovia district, the construction of batteries and long-range firing at 6,100 metres with a difference of level of 240 metres. Firing at an altitude of 1,005 metres with a howitzer whose projectiles had an elevation of 1,103 metres allowed interesting observations to be made regarding time of the combustion of fuses.—*Revue d'Artillerie.*

WAR NOTES.

The month of August, 1904, will remain for long a black letter one in the annals of the Russian Navy.

On the morning of the 10th ult., acting under imperative orders from the Tsar to leave Port Arthur for Vladivostok, the Russian squadron, consisting of the battle-ships "Tsarevitch," "Retvisan," "Peresviet," "Pobieda," "Poltava," and "Sebastopol," with the cruisers "Askold," "Diana," "Pallada," and "Novik," and eight destroyers put to sea. The fleet was under the command of Rear-Admiral Vitgoeft, who flew his flag in the "Tsarevitch"; his second in command, Rear-Admiral Prince Ukhtomsky, had his flag in the "Peresviet," and Rear-Admiral Reitzenstein his in the "Askold," in command of the cruiser division.

About twenty miles from Port Arthur the fleet encountered the Japanese fleet under Admiral Togo, consisting of four battle-ships,[1] three armoured cruisers, and some twenty destroyers, and an engagement ensued, lasting some two hours, without much result. Late in the afternoon the battle was renewed; Rear-Admiral Vitgoeft was killed, and his flag-ship, the "Tsarevitch," badly damaged, with two destroyers, managed to find shelter in Tsingtau, the German port of Kiao-chou, where the ships have since been disarmed and their crews interned by the Germans. The other five battle-ships, with the cruiser "Pallada" and three destroyers, were driven back to Port Arthur, where they remain. The cruiser "Askold," with Rear-Admiral Reitzenstein on board, and a destroyer found their way in a damaged condition to Shanghai, where they are to be disarmed and the crews either sent home to Russia or interned at that port. The cruiser "Diana," in a slightly damaged condition, managed to reach Saigon, and according to the latest report she also will be disarmed there. The third-class cruiser "Novik," whose plucky handling since the beginning of the war has excited great admiration, managed to reach Tsingtau during the night after the battle, and after coaling left on the morning of the 11th to attempt to reach Vladivostok. But her luck deserted her at last; having succeeded in reaching the coast of Saghalien in safety, on the morning of the 20th ult., when off Korsakovsk, a harbour on the south-west coast of the island, she was attacked by two Japanese cruisers, the "Chitose" and "Tsushima," driven on shore, and wrecked.

On the morning of the 14th ult., the three Russian cruisers "Gromoboi," "Rossia," and "Rurik," under the command of Rear-Admiral Jessen, having left Vladivostok on the 12th, when off Tsushima Island encountered Vice-Admiral Kamimura's squadron of four armoured cruisers, reinforced later by two small third-class cruisers, the "Naniwa" and the "Takachiho." The action began at 5 a.m., and resulted, after four hours' fighting, in the sinking of the "Rurik" and the flight of the "Gromoboi" and "Rossia" to the northward. They were not pursued

[1] With the exception of the "Mikasa," Admiral Togo's flag-ship, no statement has yet been made as to what other ships formed his fleet on the day of the battle, although apparently the armoured cruisers were the "Asama," "Nisshin, and "Kasuga."

by Vice-Admiral Kamimura, as he had to watch the Straits against any attempt by ships of the Port Arthur squadron to escape north. Over six hundred of the crew of the "Rurik" were saved by the Japanese squadron, the ships composing which do not seem to have sustained much damage, although they lost 44 killed, including 2 officers, and 67 wounded, including 7 officers. The "Gromoboi" and "Rossia" reached Vladivostok on the 16th in a very battered condition; in fact, it is admitted by the Russians that but for the sea remaining calm the "Rossia" would undoubtedly have foundered, and it is reported that more than half the crews of the two ships were placed *hors de combat*. According to the official report of Lieutenant Ivanoff, who succeeded to the command of the "Rurik," after the principal officers had been killed or wounded, both the captain and commander were mortally wounded in the early part of the action; out of 22 officers 5 were killed, and 1 was drowned when the ship sunk, and 9 were wounded; out of the crew of 800, 200 were killed and 273 wounded.

An incident occurred at Chefoo on the morning of the 12th ult. which threatened at one time serious complications. Early on the previous morning the Russian destroyer "Retshitelny" anchored at Chefoo, bringing some passengers and despatches from Port Arthur; during the day she was nominally disarmed, but her crew remained on board. On the following morning early she was seized by two Japanese destroyers and towed to Dalny on the plea that no real disarmament had taken place, and that twenty-four hours having elapsed from the time of her arrival, she ought to have been ordered to sea by the Chinese authorities, when she must have been captured by the Japanese vessels waiting her appearance outside.

Some German Criticisms on the Defeat of the Port Arthur and Vladivostok Squadrons.—Commenting on the defeat of the Port Arthur squadron by Admiral Togo, a writer in the *Kreuz Zeitung*, one of the leading Berlin organs, draws attention to the fact that the Russian battle squadron consisted of six battle-ships as against four Japanese, three of these latter, however, being more powerful ships than the Russian; while in addition three armoured cruisers must be included in Togo's squadron as against the three protected cruisers "Askold," "Diana," and "Pallada," with the third-class cruiser "Novik," which took part in the battle on the Russian side; moreover, while the Russian gun-boats and torpedo-flotilla returned to Port Arthur before the fighting commenced, a considerable number of the Japanese destroyers took their share in the battle.

"Had it entered into the head of the Russian admiral to also use his torpedo-boats in the action, as he certainly could have done, he might have achieved victory, as the two fleets were not unevenly matched. Nothing apparently, however, was further from his thoughts than winning a victory, for already at 9 a.m., before the battle commenced, he had given the order, "Proceed to Vladivostok." From that moment there was hardly a word more of united action by the fleet against the enemy. Every captain was obliged to attempt to break through the enemy's lines, and then to steam to the far-distant goal.

"It is not easy to understand the reasons why this course was adopted, and one cannot indulge in a hasty criticism of a man, who has met his death in action as a brave seaman should. But it is at least tolerably clear that the impulse which drove the Russian fleet against the enemy, after months' long hesitation, was not an attempt to bring him to battle,

but to escape from him, and in view of the circumstances of the case there could have been little expectation of doing so. The narrow exit from the harbour, which could only be navigated at high water, and the necessity of clearing away the mines laid by the Japanese, made any surprise impossible, by which a numerical superiority of force could have been assured. Moreover, according to the report of Rear-Admiral Reitzenstein, the assembling of the enemy's fleet was observed in good time. So it must have been evident that only a victorious action would clear the way for the fleet to break through successfully. Reading between the lines of the report, it is clear that the Russian fleet vainly attempted to evade the enemy. The result of a fight, carried out under such conditions, could only be defeat. If it was absolutely necessary for the fleet to leave Port Arthur, observers at a distance will nevertheless wonder, that the fortune of battle was not at least hazarded, as the issues could hardly have been worse than the result of the act of desperation, which precluded the proper use of the fleet. As we have before observed, the strength of the two fleets was not so very unequal, and even if victory had been denied, still such heavy losses might have been inflicted on the enemy that they could not have been made good before the arrival of the Baltic fleet.

"Still more astonishing appears the result of the action between the Vladivostok cruiser squadron and the squadron under Vice-Admiral Kamimura. The three large Russian cruisers were at least equal in fighting value to the four smaller Japanese ones. In spite of this, the Russians attempted to escape from the very beginning of the battle; and the Russian admiral did, in fact, make off with his two other ships, leaving the "Rurik" badly damaged as she was, and his reasons for so doing cannot, in any way, be accepted as satisfactory."

Count von Reventlow, a retired naval officer, and a well-known writer on naval affairs, in an article to the *Berliner Tageblatt*, in which he analyses the battle off Port Arthur, is even more severe in his strictures on the handling of the Russian fleet:—"I can scarcely find words," he writes, "to express my opinion of the tactics of the Russian battle-ship squadron. In vain one looks for something to compare with the want of purpose, the indecision, and the want of skill displayed in the handling of the ships. Their leaders had not a glimmer of a uniform plan of operations, nor a notion either of decided attack or decided retreat at any cost. In either plan, had it been adopted, there were chances of success, but none in aimless wandering hither and thither. And it must not be forgotten that they were very little inferior in strength to the Japanese.

"The Russians showed themselves wanting in all ability and knowledge, for it is impossible otherwise to explain the deplorable exhibition, from a military point of view, that they made of themselves. Whoever wishes to attack the enemy, attacks him!"

Count Reventlow also states that Prince Ukhtomski, who assumed the command on the death of Admiral Vitgoeft, has never borne a high reputation as a leader.

After a comparative lull of two weeks in the operations, events have for the last ten days been moving with great rapidity in the theatre of war in Southern Manchuria, and they may probably lead to the conclusion of the first period of the war in the Far East. In the middle of August, the Russian Army, under General Kuropatkin, appears to have been drawn up in a semi-circle, extending from the railway at An-shan-chan

through Liau-tiang-sân and An-ping to the Taitse-Ho, and the relative positions of the opposing armies was, apparently, as follows: At An-shan chan and its neighbourhood was posted the Ist Russian Army Corps, com posed of the 1st and 9th Rifle Divisions; opposed to them were two divisions of General Oku's Army, with two reserve brigades. In the district south and west of Lian-tiang-san was the IVth Russian Army Corps (2nd and 3rd Siberian Reserve Divisions) and the 5th Rifle Division; the IInd (3rd and 6th Rifle Divisions), the Xth Russian Army Corps (9th and 31st Divisions), and probably the 35th Division from the XVIIth Army Corps formed the left wing of the Russian position up to the Taitse-Ho. In the centre of the Japanese front stood General Nodzu's Army (9th 10th, and 8th Divisions), whilst General Kuroki's Army formed its right wing west of Hsihoyen, on a line advancing between An-ping and Liao-yang.

After some desultory fighting on the 24th and 25th August, the Japanese commenced their attack on the entire Russian position on the morning of the 26th. The advanced troops of General Oku's Army drove in the Russian outposts on the railway line, and occupied their positions. These small actions were followed by the advance of 1½ Japanese divisions, with artillery, against An-shan-chan; the assault, however, of that place slackened owing to the Russian artillery fire. On the 27th August the Russians evacuated An-shan-chan, and fell back towards Liao-yang. General Nodzu's assault on the 26th ended similarly, in the Russians retaining their positions. The Russians had to withstand a fierce assault of the Japanese on the eastern front on the 26th August. There was some bayonet fighting, and the Japanese infantry were driven back. Towards the evening of that day, however, the Japanese drove the Russian outpost on An-ping. The losses on both sides were heavy, the Russians losing over 2,000 men.

On the 27th August only small skirmishes took place, and on the following day the Japanese once more resumed their attack on the entire Russian front. During the night of the 28th-29th August the Japanese brought up a large number of guns, and commenced with an assault on the positions thrown forward below Liao-yang. The grand assault on these was directed against the centre of the Russian position, which suffered considerable losses from shrapnel fire. Many of the Japanese attacks were repulsed, and counter-attacks were delivered by the Russians along their whole front. The fighting lasted till 9 p.m., and was accompanied with heavy losses on both sides. On the 30th and 31st August, the Japanese continued their assault along the entire front, with, however, but little result. Of the details of the fighting on these two days but little is, as yet, definitely known.

On the 1st September the Japanese succeeded in driving in the Russian centre, and as a result, General Kuropatkin had to withdraw both his flanks nearer to Liao-yang. The fighting continued with great obstinacy on both sides, but the Russians were eventually compelled to retreat. Marshal Oyama reported that on the morning of the 3rd September the remnant of the routed Russians were still offering a stubborn resistance outside Liao-yang. On the night of the 3rd, the Russians commenced crossing the Taitse-Ho, burning their bridges behind them. On the 4th September, Liao-yang was occupied by the Japanese, and the Russian Army was in full retreat towards Mukden. In the meanwhile the greater portion of General Kuroki's Army had crossed the Taitse-Ho, and endeavoured to cut off the retreating Russians at Yentai. This attempt was, however, unsuccessful,

for he was met by a strong Russian force, which held him back from that place in spite of his repeated attacks; and according to the latest reports both the Russians and Japanese are making for Mukden; the situation of the retreating Russian Army remains very precarious. The losses during the recent continuous fighting have been enormous on both sides, amounting, it is said, to 60,000 men. Reports state that 200 Russian guns have fallen into the hands of the Japanese, and that an entire Russian army corps of 25,000 men has been destroyed.

The position at Port Arthur appears to be practically unchanged.

NAVAL AND MILITARY CALENDAR

AUGUST, 1904.

2nd	(T.)	H.M.S. "Naiad" paid off at Portsmouth.
"	"	General Kuroki, after two battles, in which the Russians lost heavily in men and guns, was reported to be within 25 miles of Liao-Yang.
"	"	Hai-Cheng was evacuated by the Russians.
3rd	(W.)	The British Expeditionary Force reached Lhassa, Thibet.
4th	(Th.)	Supplementary details of the Army Reorganisation were issued.
5th	(F.)	H.M.S. "Hermione" arrived at Plymouth from Mediterranean.
7th	(S.)	7th Dragoon Guards, 1st Bn. Welsh Regiment } Arrived at Southampton from South Africa in the "Dilwara."
10th	(W.)	Russian Port Arthur fleet defeated by Admiral Togo.
12th	(F.)	H.M.S. "Retribution" arrived at Plymouth from West Indies.
"	"	H.M.S. "Talbot" paid off at Devonport.
13th	(Sat.)	H.M.S. "Decoy" sunk off Scillies by collision with H.M.S. "Arun."
14th	(S.)	Russian Vladivostok cruiser squadron defeated off Tsu-Shima by Vice-Admiral Kamimura; Russian first-class cruiser "Rurik" sunk.
15th	(M.)	The Japanese general attack on Port Arthur commenced.
23rd	(T.)	H.M.S. "Pomone" paid off at Chatham from East Indies.
24th	(W.)	H.M.S. "Proserpine" commissioned at Chatham for East Indies.
"	"	3rd Dragoon Guards arrived in Ireland from South Africa in the "Dunera."
26th	(F.)	H.M.S. "Albion" paid off at Wei-hai-Wei.
27th	(Sat.)	H.M.S. "Albion" recommissioned at Wei-hai-Wei.
"	"	Launch of new scout "Forward" from the Freshfield Yard, Govan-on-Clyde.
"	"	The Japanese armies commenced a general combined assault on the Russian positions at Liao-yang.
31st	(W.)	H.M.S. "Implacable" arrived at Plymouth from Mediterranean.

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NAVAL.

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NOTICES OF BOOKS.

The Naval Annual, 1904. Edited by T. A. BRASSEY, A.I.N.A. Griffin & Co., Portsmouth. 15s.

The new edition of this well-known Annual, while in no way falling behind its predecessors, is, in some respects, an improvement on previous issues. It is not so highly controversial in tone, as it has sometimes been, and it contains more than one article of exceptional interest and real value.

As usual, the Annual is divided into three parts, each full of weighty and valuable matter. The first chapter in Part I. on the "Progress of Navies" does not call for much notice; the five illustrations of ships given, three of them being Russian, viz., the "Tsarevitch," "Bayan," and the ill-fated "Varyag," to all of which a special interest attaches, are, as has been the case for many years past, excellent. A blunder, which is perhaps excusable, has, we fancy, been made, when we are told "that the 'Retvisan' was built specially with a view to resist torpedo attack. Her armoured deck, instead of curving to meet the lower edge of the armour belt, was continued downward to the double bottom, thus constituting a protective wall inside the armour, which might be called a longitudinal armoured bulkhead. It is believed this arrangement stopped short of the stern of the ship, where the damage was inflicted by the torpedo." The writer has, in fact, made two errors, and has evidently confused the "Retvisan" with the "Tsarevitch," the peculiar adaptation of the armour deck to which he refers being the special feature of the "Tsarevitch" and her five sisters constructed or under construction at St. Petersburg. The "Tsarevitch" herself was built at the La Seyne Yard, near Toulon, from the designs, we believe, of M. Lagane, the well-known head of the constructive department of that great firm, to whose fertile brain the innovation mentioned above was probably due, and it was she which was struck aft by the torpedo, the "Retvisan" having been torpedoed well forward.

Chapter II., on "Prize Firing and Naval Efficiency," is a welcome innovation, and if continued in future issues should become an interesting and important feature of the Annual. The article is an anonymous one, but the writer has evidently taken great pains in getting his subject up, and his tone in dealing with an admittedly vexed question is studiously moderate.

Chapter III. is devoted to a detailed and somewhat voluminous description of the "British Naval Manœuvres in 1903," by Mr. Thursfield. But Mr. Thursfield, it may be said at once, is not an impartial critic; he was with Sir A. Wilson, who was in command of the "B" Fleet, on board the "Revenge," and a decided partisan bias in favour of that officer is evident all through his account. For instance, commenting on the junction of the two divisions of the "B" Fleet, which the "X" Fleet, under Sir Compton Domvile, failed to prevent, Mr. Thursfield writes:—"The plain truth is that Admiral Domvile was completely out-manœuvred by Admiral Wilson in the first stage of the operations." The plain truth being that if Admiral Wilson fixed his rendezvous sufficiently far to the westward, it was absolutely impossible for Admiral Domvile to have prevented the junction, and this Mr. Thursfield himself admits further on. Naturally, Mr. Thursfield does not agree with the decision of the umpires, but it is as well to point out here that more than a month before the Admiralty made the decision of the umpires known, expert foreign critics had given it as their opinion that the victory in the battle of the Azores clearly remained with Sir Compton Domvile and the "X" Fleet. We may quote here the sentence in which M. de Pierreval, one of the most competent French naval writers and critics of the day, sums up his view of the results of the Manœuvres:—

"Admiral Wilson had thus succeeded in forcing battle on an enemy inferior in number, but in the main the brunt of the fighting seems to have fallen entirely on his van, which would probably have been destroyed. Owing to the want of homogeneity in his fleet, he seems to have attained an inverse result to that which he tried to achieve: in place of fighting with superior forces, his van was crushed without the rest of his fleet in rear being able to intervene successfully. By way of retaliation for losing four of his best ships, he destroyed the enemy's three worst.

"Admiral Domvile, in the course of the battle, showed himself a tactician of the highest order. In spite of the way in which some of his signals were carried out, it is impossible to contest the soundness of his plan, the opportuneness of the measures he ordered, the rapidity of conception and the *coup d'œil* which determined them. He lost his three rear ships, but he regained the 'Exmouth,' his cruisers, and his free communication with his base. And if one looks from the point of view of the theme which was set, as to with which side the definitive command of the sea remained, we think that it was with him that victory lay. He lost three ships, but he regained one which he had lost, and, moreover, had destroyed his enemy's best division; he remained in communication with his base, and was in a position to fill up with coal and stores. The result that he obtained was the more remarkable, as the conditions of the battle were extremely advantageous to his adversary."

With much that Mr. Thursfield says we must all agree, especially with his remarks on the art of scouting, and it is satisfactory to note that he awards to Sir B. Walker, the rear-admiral commanding the "X" cruiser division, a due meed of praise for the successful manner in which, in spite of various difficulties, he shadowed the "B_2" Fleet until its practical junction with Sir A. Wilson's division.

Chapter IV., on "Comparative Strength," by the Editor, is, while interesting, of a somewhat contentious character. Mr. Brassey is still very anxious to see the battle-ship strength of the Mediterranean Fleet materially reduced, as, in his opinion, it is now excessive, as the naval strength of Europe is shifting from South to North. We disagree with his views on this important question of naval policy, nor do we agree with him that the expenditure under the Naval Works Act on the Malta and Gibraltar dockyards could have been materially reduced. We have to look to the future, not alone to the present, and the fact that the French Mediterranean Fleet has been somewhat reduced in strength, as compared with two or three years ago, does not in any way alter the fact that the Mediterranean is now, as it has been for two hundred years or more, the great naval strategic centre. In M. Julian Corbett's striking concluding words in his last work, "England in the Mediterranean": "The main guarantee of its stability (speaking of the European system) is the British power in the Mediterranean, and the general and lasting acquiescence of Europe in the situation which the Peace of Utrecht founded within the Straits is a recognition of that vital truth. The Midland Sea remains still, perhaps more than ever, the keyboard of Europe. Whatever other attributes it may have gained, that one must never be forgotten."

We do not fancy the authorities share Mr. Brassey's views. The Mediterranean Fleet is now more perfectly organised than it has ever been before. An additional rear-admiral to command one of the battle-ship divisions was appointed a few months ago, and the Admiralty have now followed this up by the appointment of a senior rear-admiral as Second-in-Command of the Mediterranean Fleet, an appointment which up to the present has not been officially held by any of the rear-admirals in the Fleet. The officer selected, Rear-Admiral H. T. Grenfell, is near the top of the rear-admirals' list, so it would look as if the Admiralty intended him to retain the appointment on his promotion to vice-admiral.

Mr. Brassey enters into a defence of the system of classification adopted in this chapter in the Annual, as compared with the Admiralty system adopted in the Dilke Return. We quite agree with Mr. Brassey that the classification of the battle-ships in the Admiralty Return is misleading, and that some distinction should be drawn between first-class battle-ships and vessels which are clearly only fitted for the second line; but Mr. Brassey's own classification is equally open to hostile criticism, and we fail to see why the "Nile" and "Trafalgar," for instance, are relegated to the Second Class, while he retains the German "Brandenburg" and her three sisters and the Russian "Sevastopol" class, with the "Peresviet" and her two sisters, in the First Class; also to place the French "Courbet" and "Devastation," and the "Marceau" and her two sisters, with the "Hoche," in the same category as the "Nile" and Trafalgar," is as misleading as anything in the Admiralty Return. Mr. Brassey takes serious exception to the Admiralty classification of cruisers, and particularly objects to the armoured cruisers being classed by themselves. Here we agree with the Admiralty, and disagree with Mr. Brassey entirely. In our opinion, the cruiser system of classification adopted in the Annual is decidedly as open to objection as the Admiralty classification may be. There is only this to be said: that as no system of classification will please everybody, we suppose Mr. Brassey has a right to claim to have his own.

Chapter V., on the "Principles and Methods of Armour Protection in Modern War-ships," by Sir William White, will be generally considered the most important article in the present issue. Sir William White is

master of his subject, and is a lucid and powerful writer. His article is most interesting reading, although it follows, to a certain extent, on the lines of the remarkable series of letters he contributed to *The Times* last year. Particularly interesting is his defence of the much abused "Admiral" class, as the most powerful ships afloat at their date, and on the large development of armoured cruisers in recent years. We need say no more than that the article deserves careful reading and study.

As he has done now for some years, Mr. Dunell, in Chapter VI., contributes an interesting paper on "Marine Engineering." In Chapter VII. Lieutenant Carlyon Bellairs, in a paper on "Commerce and War," finds a theme in which he is thoroughly at home, and he deals lucidly with some of the more important points of that complex problem. Like Sir William White's, his article will repay study. In Chapter VIII., Mr. J. Leyland deals with the "Reorganisation of the Personnel," a reorganisation as to the value of which it is useless at present to make any forecasts. The concluding article in Part I. is an anonymous one on the Japanese Navy, which is also interesting reading.

Part II. is devoted, as usual, to the list of ships of our own and other Navies, with accompanying plates. Some explanation is required with regard to the plates showing the armour protection of the "Tsarevitch" and "Borodino" class, as they differ materially from plates of these ships given in other works of reference. Part III. is devoted to Armour, Ordnance, and Ordnance Tables, with a chapter devoted to Submarines. The chapters devoted to ordnance matter are full of valuable information, but unfortunately they are all, including the one on submarines, by anonymous writers, which detracts unquestionably from their value; still, those on ordnance and armour seem to be the work of someone thoroughly acquainted with his subject.

The book concludes with the First Lord's Memorandum and the Estimates for the year of the principal naval Powers—always useful for reference.

Altogether, Mr. Brassey and his co-Editor, Lieutenant Bellairs, are to be congratulated on their work, which is none the less valuable, as we have already remarked, from the absence of much of the contentious tone which has sometimes marked previous issues.

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